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MORE NEWS, MORE REVIEWS

# Macworld

## Aqua X

The best Mac OS ever!



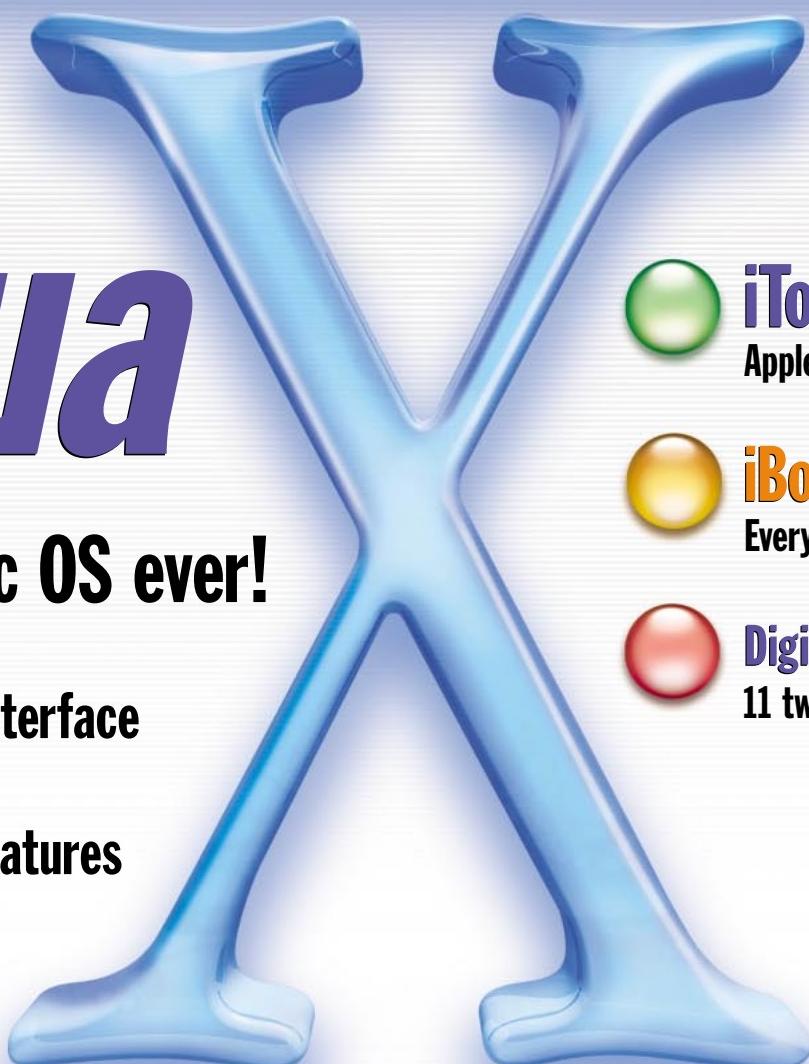
Cool new interface



Amazing features



Super-fast



iTools reviewed

Apple's free Internet goodies



iBook expert tips

Everything you need to know



Digital cameras tested

11 two-megapixel beauties



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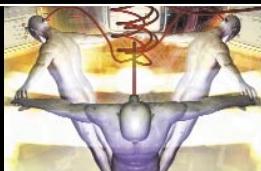
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**G**etting to know Mac OS X – with its Aqua interface full of pulsing special effects – will take some time. It'll take a lot longer than buying, unpacking and setting up an iMac. It'll take longer than installing a G4 upgrade in your old Power Mac; or even downloading QuickTime 4.1 from the Web. Forget hardware problems, alien keys, and anti-shock bracelets. It's not the nuts and bolts that are screwy. It's the software, stupid.

From this summer, we're all going to have to make friends with the dynamic Dock, not feel sick at Apple's magical Genie Effect, and learn to obey the new traffic-light buttons. Just as we struggled with curious round mice and USB connections, so we must get comfortable with Apple's new software surprises.

It's not all "Hello" and "Nice to meet you" with Mac OS X. It's also time to wave goodbye to some trusty Mac stalwarts. Apple has not only run several thousand lines of ancient code out of town – it has also called in several key features, and handed them a long-overdue Power P45. There's been tears in the Apple labs, as heartbroken control panels, extensions and utilities file out the door. There's no room for deadwood in the shiny world of Mac OS X – let's see which old functional friends are going to get the chop.

One Mac interface element that Microsoft didn't steal is the Apple menu – sticking it in Windows might have been a bit obvious even for the company's new chief software architect. Sitting proud at the far-left of the Mac's top menubar, the Apple Menu has seen it all. It may have started out as a rather anonymous black-&-white Apple, but it's always been a great place to store frequently used apps, Control Panels, Chooser and Scrapbook.

But Mac OS X's bouncing bruiser – the all-singing, all-dancing Dock – has forced the Apple Menu right off the end of the menubar. The Apple Menu hasn't just been Shut Down, it's been Put Down. In honour of its long years of software service, the Apple Menu has a monument on OS X's lined menubar – a central, blue Apple logo that's pixel-pretty but essentially impotent.

At the other end of the menubar, is the much-clicked Applications menu. Guess what, the dastardly Dock has punched that innocent icon off the shelf, too. Mac OS X collects all your open apps and minimized documents in the bottom-of-the-screen-hugging Dock.

Apple has ditched the old Parisian servants-live-at-the-top tradition for a Victorian servants-live-in-the-basement way of working. Some interface experts are disappointed that Apple didn't site the Dock to one side of the screen, maybe even both. In a world where most documents are longer than they are wide, vertical screen space is much more valuable than horizontal.

You might be wondering where the residents of the now-deceased Apple Menu will be moving to. And this is where things become less clear. Could this

be the end for the Calculator, Chooser, Key Caps, Note Pad, Scrapbook and Stickies? Hell, even super-searcher new boy Sherlock doesn't know where he'll end up in Mac OS X. Conspiracy theorists, please note the picture of the Reichenbach Falls next to the Trash icon in the OS X screen on page 70...

I like the Calculator, even if it isn't perfect: it always hides behind as many open windows as possible, and has no clear key. But surely this maths mate will make it...

The Chooser is another matter. I'll be glad to see the back of this pompous player. It's already taken a knock in Mac OS 8.5, losing its network duties to the more desirable Network Browser. Now, we'll likely see it give way on its unintuitive part in the printing process.

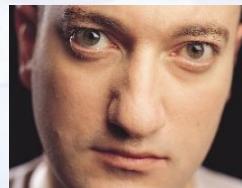
I'll also not miss the waste-of-space Note Pad and oh-so aptly named Scrapbook. The Dock'll see off the Scrap. So it's goodbye to the Teddy Bear, pastel party-hat and Apple-branded Ferrari. It's been a long time coming, fellas. Don't keep in touch.

How in the name of desk clutter did the Note Pad survive the arrival of the equally stupid but frankly yellow Stickies? This is one of those circular questions that, thank God, will disappear with the coming of X.

Lots of *Macworld* readers were down in the dumps when Apple threw out the UK's very own Wastebasket. It didn't take us long to get used to the bottom-right icon being renamed Trash – after all, it looked more like a trash-can than it ever did a wastebasket. So what have Mac OS X's icon designers come up with, just a few months later? A Trash icon that is a photo of a wastebasket. What do we think of that? Rubbish.

Mac OS X's many advances will also see off several third-party favourites – most noticeably on the font side: Adobe Type Manager, Type Reunion, Suitcase, et al. Apple now has its own anti-aliasing and grouping technologies, although it won't take long for others to find new fixes for font foibles.

It might be painful – it might be sad – but we'll soon have to bid farewell to many aspects of the Mac OS that we've grown accustomed to. But, remember, there was only a very brief period of mourning when Mac OS 8.5 cut up the once-feted Jigsaw Puzzle, which itself had done in the older sliding-block puzzle. While we'll live with the passing of this legion of legacy interface zombies, I am absolutely sure that, with Mac OS X, Apple will bring us a new dysfunctional family of silly-named tools and equally useless desktop junk. And I'll be first to welcome them all aboard. MW



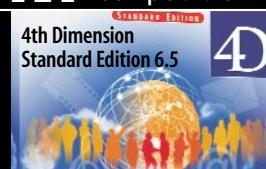
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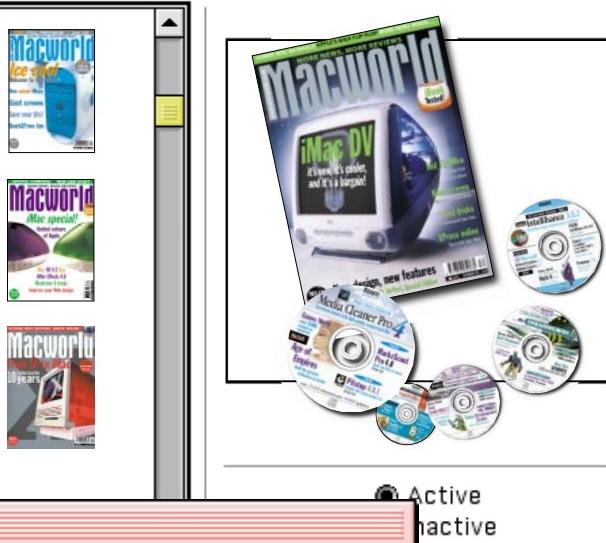
Crash-landing for Apple?

## opinion

# Macworld

On    The ultimate reference guide and news source for the Macintosh market.

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### More winners, more great prizes

Hearty congratulations to our three winners of December's Digital Origin EditDV FX competition. They are: Mr R Evans, Stroud, Gloucestershire; Mr M Brockbank, Barrow-in-Furness, Cumbria; and Mr A Wardrop, Llandeilo, Carmarthenshire.

And well done to the winners of December's Macworld Jackpot give-aways, who are:

**Norton Utilities 5.0:** George Hilton, Preston, Lancashire; Daniel Cohen, London NW1; Martin Fczcericki, Brighton, East Sussex; Chris Dart, Sutton, Surrey; and Mr CR Spencer, Stafford, Staffordshire.

**The Plot to get Bill Gates and Infinite Loop:** Peter Wood, Waterloo, Hampshire; Mr M Hill, Farnham, Surrey; Richard Turner, Liverpool, Merseyside; and Geoff Taylor, Kidlington, Oxfordshire

**Virex 6.0 and Norton Antivirus:** Brian Hogg, Westhill, Aberdeenshire; Collin Gardiner, London EC2; Paul Barrett, Leeds, West Yorkshire; Antonia Reeves, Edinburgh, Midlothian.

Congratulations also to Mr J P Snee from London, who is the winner of an iMac, courtesy of the Borders in-store promotion, in association with Macworld and Camelot.



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# Macworld

**Free – full CorelDRAW 8 LE package! Plus playable demos of Star Wars Episode 1 Racer and Quake III Arena, and all the latest demos, shareware and updaters. In the guise of Anakin Skywalker, Vic Lennard leads the way...**



## Install Me

Before you start working your way through the software on our CD, go to the System Utilities folder and make sure you install the following:

### ■ QuickTime 3.0.2

Many of the demos need this installed. It gives you QuickTime 3.0.2 plus the MPEG, VR, Musical Instruments and PowerPlug add-ons.



### ■ Acrobat Reader+Search 4

Install this version to be able to read many of the on-screen manuals.

### ■ StuffIt Expander and DropStuff

Versions 5.5, 5.1.2 and 4.5 are included.

### ■ Also included

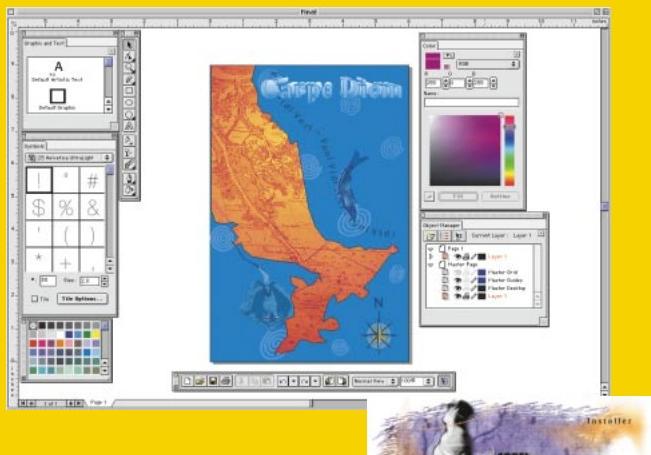
A number of useful utilities such as Apple Game Sprockets 1.1.4, OpenGL 1.1.2, InternetConfig 2.0 and Apple Appearance plus essential items such as Apple Disk Copy and Drive Setup.



## Some of the programs on this month's CD need QuickTime 4...

... so we've included QuickTime 4.02. To install the latest system extensions, control panel and utilities, drag the folder from *Apple Standards* inside *System Utilities* on our CD to your machine. Then drag-&-drop the QuickTime Install Cache file on to the QuickTime Installer and follow the on-screen prompts. The installer is a complete stand-alone package and does not need an Internet connection.

## CorelDRAW 8 LE: Full working version!



Preview the award-winning power of CorelDRAW 8 without being limited by a time-sensitive trial. Discover an incredible collection of tools for illustration, page layout, photo editing and painting with CorelDRAW 8 Limited Edition for Mac. This exciting version is a comprehensive solution for Mac users who want immediate functionality and don't require all the features of the full CorelDRAW package for professionals. With Live Effects, professional colour management features and outstanding compatibility, CorelDRAW 8 Limited Edition for Mac delivers exceptional creative freedom.

Designed specifically for the Mac OS, CorelDRAW 8 Limited Edition provides professional graphic designers, illustrators and desktop publishers, as well as graphics enthusiasts, with a comprehensive collection of tools for vector illustration, page layout, graphic design, image editing and raster(bitmap) creation.

The ease-of-use factor is high: Live Effects allows you to change effects applied to objects without starting from scratch. The interactive tools can be used for numerous effects like drop shadows, blends, extrusions, fills, transparencies and more. The program is also highly compatible with other graphics programs and formats, including Adobe Photoshop, Illustrator, QuickTime, PDF, EPS, TIFF, GIF, JPEG, PICT, PCX and many more. Additionally, maintain layers when opening and editing Corel PHOTO-PAINT 8 or Photoshop image files within CorelDRAW 8 and use most of your existing Photoshop plug-ins.

CorelDRAW 8 Limited Edition uses the industry-standard Kodak Digital Science Color Management System and standard ICC colour profiles to ensure colour accuracy during scanning, on-screen and when printing. Also included is Corel PHOTO-PAINT 8, an excellent, fully-featured image creation and retouching program.

The package requires a Power Mac, Mac OS 8.1 or higher and 32MB RAM with virtual memory enabled. And it's yours to use – for keeps!



More CD contents on page 12



# Serious Software



## Extensis Suitcase 8.2

**Suitcase 8** is a collection of powerful font management utilities that make working with fonts faster and easier than ever before. Group fonts and open them only when you need them, and have Suitcase open fonts automatically when an application is launched. Other tools allow you to organize your fonts, prevent font conflicts, view fonts in font menus in WYSIWYG format, and have missing fonts in QuarkXPress documents open automatically.

Suitcase 8.2 is Mac OS 9-compatible and includes an updated version of MenuFonts. Try the complete package for 30 days.



## Finale PrintMusic! 2000

**PrintMusic! 2000** is the fastest way to create, play and print sheet music. Its new Instrument Set-up Wizard lets you select the instruments you need, then sets up your score perfectly on any page size you specify, with staff names, transpositions, groupings and clefs. Music is spaced automatically as you enter it in step- or real-time, giving you the look of a finished piece of music throughout your creative process. It also sports a new, more professional-looking default font, Maestro, which more accurately reflects actual engraved music: bolder noteheads, elegant clefs and classical articulations. Demo is fully featured but save-disabled.



## Font Reserve 2.5

Font management with complete flexibility in organizing, maintaining and using your fonts – that's Font Reserve. It takes complete control of fonts and provides an intelligent, flexible and easy-to-use browser interface. Font Reserve pre-processes all the fonts in your system, extracts complete font information and organizes them in a database so you never have to touch your physical font files again.

Now includes Action WYSIWYG (30-day trial), compatibility with Mac OS 9 and plug-ins for Illustrator and QuarkXPress. Demo allows 100 fonts to be added to the database.

## Don't miss...

■ Cool Extras! Mac OS X Movies  
*The shape of things to come...*

The Apple Startup Set 4.5  
*Superb set of new icons*

Uli's Moose 2.1 *Manic talking moooooose!!*

Internet access offers from  
Abel Internet, AppleOnline & FreeUK.

■ plus... Many thanks to IconFactory ([www.iconfactory.com](http://www.iconfactory.com)) for the icons used on our CD



## Also on the CD

### APPLE (in the System Utilities folder):

Final Cut Pro 1.2.1 Update  
iMac DVD-ROM Update 1.0  
Mac M/gement Server 1.2.2  
Mac OS 9 Audio Update 1.1  
Macintosh Manager 1.2.2  
Open Transport 2.6 Update

### COMMS & INTERNET

19 applications including:  
Anarchie 3.7  
Shockwave  
ViaHTTP 1.7.2

### SOUND & MUSIC

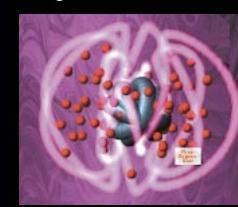
Nine applications including:  
Eartraining 2.6.2  
Sound Sculptor II 2.4.2  
VB-1 Virtual Bass Plug-In



### UTILITIES

Ten categories comprising over 50 useful tools for your Mac including:

Aladdin DropZip 5.5  
Alpha 7.2  
BeHierarchic 4.1.1  
Check Folders 1.3  
EpsonShare 1.4  
FinderPop 1.8.4  
FoldersSynchronizer 1.8.1  
Jeremy's CSM Bundle 2.0.2  
LCDtest 1.0.1  
MacArmyKnife 1.7.1  
PrintToPDF 1.1.1  
QXP Images Catalog 2.0  
Symbionts 2.8.4  
Team Scheduler 1.3.1  
textSOAP 2.0.1  
Troi-Coding-Plug-in 1.5  
plus five XPress XTensions



### ICON UTILITIES

IconBuilder Pro v1.0

### INFO

1984 on-line issue 20  
AppleWizards Nov 99  
ATPM 512/601  
Extension Overload v4.7  
MyMac 56/57  
plus seven items for developers



### MATHS & SCIENCE

Four utilities including:  
PowerCalc 5.1  
The Atomic Mac 3.5.8

### UPDATORS

This month's dedicated updaters folder includes over 90MB of patches to bring many popular applications bang up-to-date, including:  
Aurora Fuse 1.8.3  
Excel 98 Y2K Update  
FaxStfPro 5.2  
FileMaker Pro 5.0v2  
HP DesignJet 1050C/1055CM  
LexiVerb 2.0  
Logic Platinum 4.1.2  
Macally USB Manager v2.2  
MacLinkPlus/Mac OS 9  
MasterJuggler 2.0.3  
Norton AntiVirus 5 & 6 (01/00)  
SoundJam MP 1.6  
Toast 4.0.1.1  
Virex (01/00)

## Other demos & trials include:

Funnel Web Lite 3.6

MacWasher 1.0.2

Now Up-to-Date/Contact 3.8

QuicKeys 4.1

Spell Catcher 8.1

VSE Be Found 1.5.1



## Shareware

Many programs on this CD are shareware, which means that if you keep them and use them for more than the allowed time (usually up to 30 days) then you must pay for them. Treat shareware as budget-priced commercial programs – support shareware authors so that they continue to provide high-quality programs for the Mac.

More CD contents on page 14



## Star Wars Episode 1 Racer



Remember the fantastic podrace scene in *Star Wars Episode 1: The Phantom Menace*? Well now you get to drive a podracer around the incredible Boonta Eve Classic race at Tatooine. Choose from the six racers, studying their vehicle statistics to see which one will give you the edge, and inspect your podracer. Then it's up to the starting line and you're off – on a three-lap, high-speed blast around the open areas and tight, twisty bends that is Tatooine.

Drag the folder to your hard disk before installation. Demo requires at least a G3/233MHz with a Rage Pro video card/Open GL 1.1.2, and 32MB RAM with virtual memory set to at least 64MB. Go through the Read Me carefully before installation.

## Quake III Arena

Welcome to the next generation of multiplayer gaming. In this demo you can view Quake 3 Arena's tremendous 3D engine, play the most violent deathmatches ever known to man, and practice offline using id software's most advanced bots. Try out the weapons. Run around the incredible maps. Fight against the best artificial intelligence ever seen – and then join one of the many Internet-based multiplayer games. Warning: the game carries a '17' age rating.

This demo requires a G3, 64MB RAM minimum and a video card that supports 3dfx's Glide or OpenGL (Rage Pro or better). Please note: ignore the Readme alias. Look inside Extras/Help to find the Read Me and manual.



## Games World

Top of the list is a three-level demo of Ferazel's Wand, Ambrosia Software's latest winner. Card players will enjoy 500 Cards 2.0.1 and Romi 2.0 while David's Backgammon 3.0.3, Dominoes 1.2, Reversi Unlimited and Vanessa Chess 1.5 will satisfy board gamers. Skittles 2 and Mega Minesweeper are nice plays on classic games, and the puzzlers among you should aim for AlphaNatix – Urban Legends and PerTetride v1.1. And arcaders won't miss out: there's Galactica – Anno Dominari and The 20th Century Aerial Joust.



AlphaNatix – Urban Legends



Ferazel's Wand



### FAULTY COVER CD-ROM?

If your cover CD doesn't seem to work as it should please check you have read all the instructions on the cover disc pages carefully first. If it still doesn't work, then please email Woody Phillips at [woody@macworld.co.uk](mailto:woody@macworld.co.uk).

If your cover disc is broken and you want a replacement CD, please contact Kelly Crowley, on 0171 344 4375, or at [kelly\\_crowley@macworld.co.uk](mailto:kelly_crowley@macworld.co.uk).

### Macworld CD catalogue

Courtesy of Mark Pirri's superb DiskTracker program, Macworld brings you a searchable catalogue of all our CDs from 1997 to 2000 – over 138,000 files! This will grow month by month to allow you to find any file you want, without wearing out your CD-ROM drive. The latest version of DiskTracker (1.1.4) is also included – don't forget to register if you find our library useful.





**Macworld**

Our second CD this month contains PDF files of all editorial pages from last year's issues of *Macworld* – plus our Digital Publishing special report.



## Free! The entire 1999 *Macworld* back-catalogue

Courtesy of Adobe Acrobat, you can now read on-screen, all 856 editorial pages from the 1999 issues of *Macworld* plus the 36-page Digital Publishing special report that appeared with the October issue. Even better, the entire collection is searchable – just type in a word or phrase and all pages containing it will be

listed. Acrobat Reader 4 – included on the CD – requires a Power Mac. Additionally, you'll need to give around 25MB of memory to Acrobat Reader 4, due to the graphic-intensive nature of the pages.

For more information, have a look at this month's Create PDF feature on page 103.

### A how-to guide to the PDF archive-CD

- Install Acrobat Reader+Search, which can be found in the Install Me 1st folder.
- Once installed, increase Acrobat's memory allocation to 25MB.
- Double-click on the Issue Selector file.
- Click on a cover: this takes you to the Contents page for that issue.
- Use the floating Bookmark palette to move around the magazine. This can be toggled on/off via your F5 keyboard function key.
- You can also move directly to a feature by clicking on its title on the Cover or the Contents page. The cursor changes to a pointing finger.
- Clicking on a Web site address in News, Product News, Opinions, Reviews, Features, Creates, Secrets and Q&A takes you to that site via your browser. The cursor changes to a pointing finger with a 'W' on the back of the hand.
- Zoom in by using  $\text{⌘}-\text{spacebar}$  and out by using  $\text{⌘}-\text{alt}-\text{spacebar}$ . Use the cursor keys,  $\text{return}$  or  $\text{enter}$  to go to the next page or move down if zoomed in. Use  $\text{⌘}-0$  to fit to screen and  $\text{⌘}-1$  to zoom to 100 per cent.
- All pages are threaded; when the cursor appears as a hand with a downwards arrow, a click will make the page zoom in. After reading that part of the page, click again to go to the next part.
- Use the Bookmark to go back to the Cover and click on the Return to Issue Selector button in the bottom-left corner to go back to the start.

### Using the search facility

- Start at the Issue Selector and click on one of the covers.
- $\text{⌘}-\text{shift-X}$  gets the Index Selector. *Macworld* 1999 should be checked. If not, go to the 1999 folder on our CD and select it there.
- $\text{⌘}-\text{shift-F}$  then brings up the Search window. Type in a word or phrase you would like to find and click on OK to bring up the Results window showing all occurrences.

- Double-click on an item in the list. You'll be taken to the relevant page with the word highlighted.  $\text{⌘}-]$  takes you to the next occurrence,  $\text{⌘}-[$  to the previous one.
- $\text{⌘}-\text{shift-G}$  takes you back to the Results window.
- $\text{⌘}-\text{shift-W}$  brings up the Word Assistant – use this if you're having problems with a particular word.



Once in Issue Selector, simply click on the cover that contains the content you wish to access.



Use the Bookmarks to find your way around each issue.

## X marks the spot for

**Next-generation Mac OS X revamps user interface and re-engineers overall system performance.**

- Aqua revealed
- New Net strategy
- Jobs becomes permanent CEO

**A**t a packed Macworld Expo keynote speech, Apple's co-founder Steve Jobs wowed the Mac faithful with the first-ever public viewing of Mac OS X. He also unveiled an all-new Apple Web site and innovative Internet strategy, with the ultimate goal of making Apple's computers show up Windows PCs rather than merely stay even. Jobs also dropped the "interim" part of his job title, becoming Apple's permanent CEO after two and a half years as acting chief executive.

Many analysts had expected Apple to preview new hardware products – particularly a revamped PowerBook, code-named "Pismo". But Jobs said that Apple was now thinking "beyond the box", and went on to detail a strategic Internet plan and a schedule for Apple's next-generation operating system.

**Mac OS X: so good you'll want to lick it**  
**'Lickable' Aqua** The first glimpse of what Mac OS X will actually look like was the centrepiece of Jobs' keynote speech. Besides touting such now-familiar Mac OS X components as Darwin, Cocoa and Quartz, Jobs unveiled Aqua, the new system's user interface. Jobs said that the liquid-like Aqua will make users want to "lick their screen". Key developers, such as Macromedia and Microsoft,

had not been given an early look at Aqua. It apparently stunned even some of Apple OS X software engineers – amazingly including Apple product manager for Mac OS X, Ernest Prabhakar – who had been kept in the dark on many of the new-look elements.

Aqua has been a top-secret project at Apple for the past 18 months, with Jobs claiming that over 2,000 people worked on the new OS. According to Apple, extensive testing has determined the viability of the lush new interface. Ken Bereskin, director of OS technologies, says that Apple is now making only refinements to the OS, not implementing new components: "All the big things are well on their way to being complete".

Aqua makes extensive use of colour and transparency; for example, red, green and amber buttons at the top left of each window close, maximize or minimize the window.

Apple's plan for Mac OS X includes five major goals: a single OS strategy, state-of-the-art plumbing, killer graphics, design for the Internet and a gentle migration path for users. All of these goals, Jobs said, will allow Apple to make the next great personal operating system.

Principal Mac OS X features include the 'Dock', which replaces the Applications and Apple menus by creating an ultra-visual file and program

**S**teve Jobs is no longer interim chief executive officer of Apple Computer – after announcing at San Francisco's Macworld Expo 2000 that he is to drop the 'interim' and become permanent CEO of the company. In recognition for his service to the company during the past two and a half years, Apple's board of directors has offered Jobs a stack of share options and his very own jet.

As part of an extraordinary compensation offer following the announcement of Apple's \$183 million first-quarter profit, Apple's board has voted to grant Jobs stock options to purchase 10 million shares of Apple common stock. The options were granted a week before the profits announcement, when Apple's stock closed at \$97. At the time of writing, Apple shares were sitting pretty at \$111 – a potential profit of \$140,000,000 already for Jobs.

### Return of the Mac

Apple's stock set an all-time high of \$118 in early December 1999, and has hovered around \$100 ever since – a staggering eight times the \$12 price at its low point, shortly after Jobs regained control.

Under co-founder Jobs, Apple has made a remarkable turnaround. Apple now has a strong, focused product line-up – including the incredibly successful iMac and the US number-one portable computer, the iBook.

## Steve Jobs sticks with Apple

**Co-founder will stay for four-to-five years – gets jet, 10m shares**



From an organizational standpoint, Apple seems stronger than ever before – with less than a day's inventory weighing down the company's revenues.

That's the real reason Jobs stripped the word 'interim' from his title. "Apple offers me a base that I would be foolish to walk away from," Jobs told *Fortune* magazine journalist Brent Schlender. "Think about it. By the end of this year we'll have maybe \$5 billion in the bank, the Macintosh will be thriving, hopefully our Internet services will be a big hit, and our engineering teams will be operating at the peak of their games. I'm always keeping my eyes open for the next big opportunity, but the way the world is now, it will take enormous resources, both in money and in engineering talent, to make it happen. I don't

know what that next big thing might be, but I have a few ideas. Whatever it is, it will be much easier and better to use Apple as the springboard than to have to start from scratch."

Jobs says he plans to stay with Apple at least four or five more years. He still wants to be known as iCEO, though – swapping the 'interim' for 'Internet', because "it's cool".

Jobs, whose annual salary remains a token \$1, has taken no compensation since returning to the company over two years ago. Since then, Apple's market capitalization has risen from less than \$2 billion to over \$16 billion. The Apple board is showing its appreciation for Apple's performance under Jobs' leadership by giving him the luxury jet and options, said board member Ed Woolard.

## new-look

## Aqua Apple

repository at the bottom of your Mac's screen.

The interface aims to be "better yet familiar", says Avie Tevanian, senior vice president for software engineering. "Aqua pushes the envelope, but it doesn't create a whole new envelope... we want to preserve the best elements of the Mac OS."

**One OS for all** Apple will concentrate on a single-OS strategy, unlike Microsoft's multiple Windows operating systems. This means that the operating system must please iMac/iBook consumers as much as Power Mac/PowerBook professionals. This should mean greater compatibility across applications. Jobs considers Aqua the ideal user interface for consumers and power users alike, making a comparison to Pixar's *Toy Story 2*, which aimed to entertain both children and adults – on different levels.

"Who says consumers don't want and need the best technology?" says Phil Schiller, Apple's vice president for worldwide marketing. "Always

before, the consumer market was considered the tail of the dog. Well, we're driving advanced technology back to the consumer. That's how the whole PC business started."

Regarding the fate of Mac OS X Server, version 1.2 should be out by the time you're reading this. It will be the last release of Mac OS X Server as a separate code base from Mac OS X. According to former *Rhapsody Report* editor Raven Zachery, all indications are that Mac OS X Server will simply be a software bundle – including WebObjects; AppleShare IP; NetBoot; and other services – that can be installed on top of Mac OS X. This is a similar arrangement to AppleShare IP running on top of Mac OS 9.

**Easy navigation** Mac OS X will also feature "state-of-the-art plumbing", according to Jobs. As part of this "plumbing", Aqua features enhanced navigation features, which Jobs claimed represent a better implementation of the current Mac Finder. While the current Mac OS "generates a ton of windows, and you get to be the janitor", Jobs said, Mac OS X offers a more-convenient management of open windows.

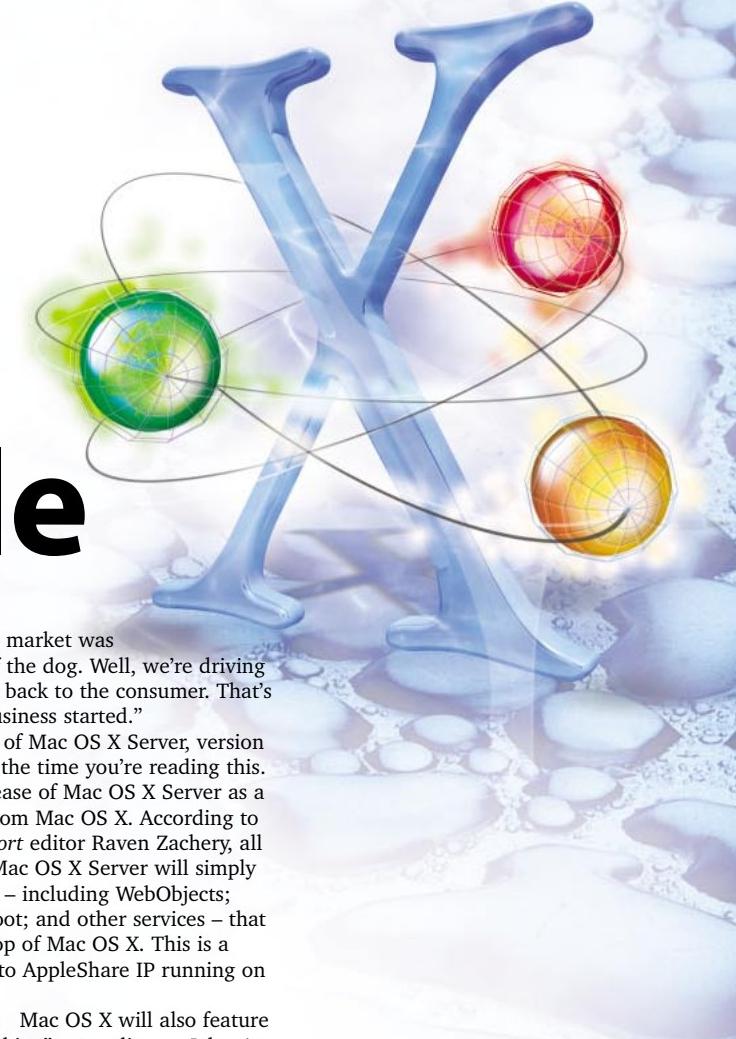
**Killer graphics** Good news for 3D professionals and consumer gamers – Mac OS X's imaging layer will include built-in OpenGL, the industry's most-widely supported 3D graphics technology. OpenGL operates alongside Apple's PDF-based Quartz technology and QuickTime's multimedia capabilities.

**Strong foundations** At the core of Mac OS X is Darwin, Apple's advanced operating system kernel. Darwin is Linux-like, and brings an entirely new foundation to the Mac OS, offering Macintosh users true memory protection for higher reliability, pre-emptive multitasking for smoother operation among multiple applications, and fully Internet-standard TCP/IP networking.

For more on Mac OS X – which Jobs said "will bring the Mac legacy into the next century" – and Aqua, see our feature from page 66.

**Developers rally round Aqua** Apple announced that more than 100 leading software developers have pledged their support for OS X. In a series of rapid-fire, personal-appearance testimonials from third-party developers, Adobe executive vice president Bruce Chizen said his company is "committed to having all our key apps at least Carbonized by the time Mac OS X ships".

continues page 20





#### Think pre-digital

Jobs informed the keynote audience that Apple will continue with its 'Think Different' campaign, this year honouring film directors to fit in with the company's digital-video focus. Alfred Hitchcock, Charlie Chaplin (behind the camera), Frank Capra, Stanley Kubrick and Francis Ford Coppola (looking amazingly like Apple's co-founder, Steve Jobs), will all feature in the black-&-white brand campaign in 2000.



Macromedia's Rob Burgess said he was "speechless" following the OS X demo, calling it "beautiful". He said that his company was able to port Flash to Mac OS X in a week and a half using just one engineer... "and he wasn't even that good", Burgess quipped. He promised to deliver all Macromedia's applications to OS X.

Acting general manager of Microsoft's Mac business unit, Kevin Browne promised to release Mac OS X versions of Internet Explorer and Outlook Express at the same time OS X is released this summer. Quark's president of desktop development, Richard Jones promised to support the Mac "for the long term". Palm Computing's new CEO Carl Yankowski also offered to support OS X.

**When can we have it?** Mac OS X reaches final beta this spring. It will then be released in the summer, maybe as early as Macworld Expo, New York. Finally, all Apple machines will be preloaded with the new OS in January 2001.

#### Internet revamp

Jobs also used his expo keynote to unveil the company's highly anticipated Internet strategy.

**Packing iTools** At the core of Apple's Internet strategy is iTools, a new category of Internet services that takes advantage of Apple's technology on both ends of the Net – Mac OS 9 on the client side and services software (iTools) running on Apple's Internet servers.

"iMac users can get everything else on the Web that everyone else gets, plus all these new services. They can now do things on the Net that Wintel users can only dream of," boasted Jobs.

iTools are designed to take particular advantage of Mac OS 9, and OS X when it hits the market. Eddie Cue, senior director of Internet services gushes: "We're the first to really let the operating system play a key part in Internet computing. In some cases you won't even need your browser to take advantage of an iTool."

Apple announced its first four iTools at Macworld Expo: KidSafe, "a breakthrough way" to protect kids on the Internet; Mac.com, giving users an exclusive email address on the Internet; iDisk, a new way to store, transfer and share files over the Internet; and HomePage, an easy way to build your own personal Web site "in less than 10 minutes" using smart Apple templates.

Jobs called iDisk the "most profound" of all the iTools, and it is indeed key to several of the others. iDisk provides every Mac OS 9 user with 20MB of free data-storage space on Apple's servers. iDisk also provides a "public folder" so that you can make stuff available for other Web-connected Macintosh users to see or download.

What makes iDisk different to other Internet-based free-storage sites is that it looks and behaves just like a disk drive inside the machine. Users drag-&-drop files onto the iDisk icon – and the next time the Mac goes online, it automatically uploads the data to Apple's servers.

"I actually think that our new Internet services are going to be the equal of OS X in making the Macintosh stand out," says Jobs. "They're so hot." Read our extensive iTools review on page 48.

However, iTools require a US or Canadian Zip code – and so currently requires worldwide users



#### iBook lovers

Announcing that Apple portable computers held an 11 per cent share in the US laptop market, Jobs listed impressive figures for the consumer iBook. He called the iBook a "runaway success, with 11 per cent of iBook purchasers being first-time computer buyers and 17 per cent "Wintel switchers". For 56 per cent of customers, the iBook was their first portable computer in the home, with 90 per cent of them on the Internet, Jobs said.

to fake an address in order to take advantage of the free services. Apple says that iTools are "optimized for users in North America".

In an interview with *Macworld*, the director of Mac OS worldwide product marketing, Peter Lowe said that Apple "wants to roll out the new Internet services internationally", but he couldn't give us a date when UK users would have access to the Mac-specific services.

Lowe, who is in charge of the new Internet programme, told *Macworld* that "other English-speaking countries" would get the iTools "next" after quality issues had been proven in North America. iTools require "levels of localization and regionalization" before any roll-out elsewhere in the world – particularly in non-English-speaking countries. iTools also require Mac OS 9.

**Apple's new-look Web site** The newly redesigned Apple.com Web site, which currently draws nearly ten million visitors per week, also features iReview and iCards. *iReview* is a Web-site review guide, with Web sites reviewed and rated by Apple. *iCards* is Apple's electronic greeting-card site, offering good-looking greetings cards that can be sent and viewed via standard email. Jobs said that existing offerings made him "embarrassed to be a human".

**EarthLink bounty** A new multi-year deal makes EarthLink the exclusive Internet Service Provider in Apple's Internet Setup Software, included with all Macs sold in the US. Apple has made no comment on similar plans in the UK, or anywhere outside of the US. Apple profits from each new Mac EarthLink customer. In addition, Apple has invested US\$200 million in EarthLink, and receives a seat on EarthLink's board of directors.

# First-ever iMac speed upgrade

**N**ewer Technology, developer of the first Power Mac processor upgrades, has stolen another march against its rivals by introducing the iMAXpowr G3 466 processor upgrade card – the first-ever, third-party internal speed ramp for the iMac. The upgrade boasts a 466MHz G3 PowerPC processor with 1MB backside cache that runs on a 155MHz cache bus. The upgrade will begin shipping in the first quarter of this year, and is designed for the first four versions of the iMac (revs A, B, C and D). It's compatible with Mac OS 8.1 to OS 9.

## Chip replacement

The iMAXpowr G3 466 simply replaces the stock iMac processor card. When you buy the upgrade, you get an instructional video as well as a printed manual, showing you how to open the case, pull out the Apple stock processor and install the upgrade. No software or drivers are required.

Pre-November 1999 iMacs are notoriously tricky to upgrade. Today's latest iMacs – ranging in speed from 350MHz to 400MHz – feature easier internal access.

According to the company, the upgrade returns a processor benchmark score (using MacBench 5.0) of 1,360 against a stock 233MHz iMac that scores 719. Even the 333MHz rev. D iMac (score 929) gains from the upgrade. The upgrade costs \$699 (about £450), though Newer is operating a rebate scheme in which you may claim back up to \$200 if you return your iMac's original processor.

## 466MHz G3 card promises to double oldies' speeds



Today's 350MHz iMac costs £799, including VAT; 400MHz models cost from £999.

The company suggests that its beta testers found the upgrade to be "rock solid" in pre-release trials. Eric Dahlinger of Newer Technology said the upgrade will initially be available in the US only – but with a thriving European iMac market, UK distribution (contact AM Micro, 01392 426473) is possible this spring. **MW**

## QuickTime 4.1

**A**pple has posted the latest version of QuickTime on its Web site. A free download, QuickTime 4.1 offers seamless ad integration, improved firewall navigation, AppleScript support, multiple movie playback support, and support for variable bit rate MP3 files. QT 4.1 also lets content producers insert advertising into QuickTime streams, though Apple has not said whether ads will begin to appear on any QuickTime channels. The company also posted version 2.0 of its QuickTime streaming server, featuring relay support, enhanced login and authentication support.

Finally, Apple introduced five new QuickTime channels, bringing independent film and music to its bandwidth. The new channels include AtomFilms, New Venue, D.FILM, V2 records and brandnewmusic.com. **MW**

– Louise Banbury

## AOL/Warner/EMI to boost Web content

**T**he merger of the music units of Time-Warner and EMI, combined with AOL's takeover of Time-Warner promises a music-industry powerhouse destined to change the face of the Web's entertainment content. Los Angeles Times' Chuck Philips called music "the most immediately valuable entertainment asset on the Internet."

Warner-EMI's international operations will be based in London. The combined AWE (AOL, Warner, EMI) alliance is worth more than £300 billion, and puts the prospect of convergence between old and new media back on table.

The deal was driven by technology, says analyst Gary Arlen. For Apple the deal can only strengthen the company's new, 'out-of-the-box' Internet-based strategy, as consumers find even more reasons to go online, looking for enriched Web content, the inevitable by-product of the deal.

Internet users have increasingly bought, sold and traded songs online, with MP3

becoming the medium of choice. Record companies have resisted the move to online distribution, with recording industry trade groups fighting the MP3 standard, saying it too easily lets users trample copyrights. Despite this, Arlen says: "No one knows which way the music business is going, but they know they have to be online." Major artists, like David Bowie however, are ahead of the game, favouring the downloading of music for low prices or even free.

MP3.com is a current victim of the music industry's anti-Web prejudice. The company rejects claims by the Recording Industry Association of America (RIAA) that its site infringes copyright law. Michael Robertson, CEO of MP3.com, said: "The RIAA's action tells consumers they are not entitled to take their music into the digital age."

EMI and Warner Music Group though, have separately supported the Secure Digital Music Initiative, which is an effort by record



companies to create a rival standard to MP3 that blocks users from hearing the sounds unless they have paid appropriate copyright fees. This group moves very slowly, its lack of enthusiasm seen as symptomatic of the music business' lack of spirit for going online.

In a statement regarding the merger, EMI said: "EMI is optimistic about the prospects for the music industry. However, EMI's continued success requires an increasing commitment to new media." **MW**



IN

## Brand-new Apple unveiled

**M**asked by all the excitement of San Francisco's Macworld Expo 2000 was Apple's quieter – but significant – corporate rebranding. The first visible sign of the brand transformation was the company's new-look US Web site – introduced during Jobs' keynote speech – with its host of Web-friendly features (see page 20).

The site – so far updated only in the US – was our first glimpse of the redesigned logo, now embossed and available in five iMac-like fruity, translucent colours, called "gems".

The company has redesigned all of its corporate stationery, including business cards, brochures and letterheads. In a further change, Apple has altered the corporate information on its press releases, changing its identity from "Apple Computer Inc." to just "Apple". Apple seems to be following in the footsteps of Sony, Nike and Gap, further refining and exploring its relaxed cool style of brand advertising. Dropping the "Computer" from its name would also fit in with the company's expansion "beyond the box" into Internet and other multimedia sectors.

The company is thwarted from a total switch to calling itself plain "Apple" by the continued existence of the Beatles' Apple Corps, which occasionally releases Anthology LPs and looks after mop-top concerns. Spokesperson Kathy



**iMac-ization continues with 21st century image for evolving Mac maker**

Penneger told *Macworld* she hadn't heard of Apple Computer's plans.

The history of the Apple logo is a rich one. Originally, it was a complex ink illustration of a seated Sir Isaac Newton, resting his back against a tree while reading (left). Above his head, hanging from a branch, was a glowing Apple. Circling this quaint tableau was a windswept banner reading "Apple Computer Co". The logo was more Haight-Ashbury hippy than cool computer chic.

In 1977, this ornate corporate logo made way for what has become one of the best-known and most-recognizable logos in modern history: the rainbow-coloured Apple (see below left).

In Apple's "Guidelines for using the Apple logo" booklet, the company states that its identity "is one of our most important assets. We invest in it every time we use it."

"The recognizability and power of the Apple identity aren't an accident. Over the years we've built our name and logo into the symbols of that simplicity and friendliness," Apple continues.

As we reported in the November 1999 issue of *Macworld*, a recent Sterling Group survey of brand recognition showed Apple to be one of the seventh best-known brands globally.

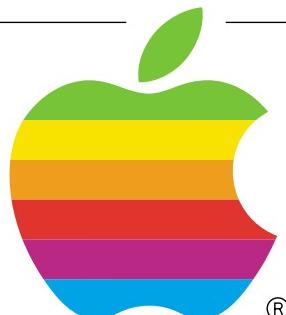
Two years ago, that logo stood for a company teetering on the brink of extinction. Now, with a new brand identity and sales at an all-time high, the new-look logo is seen as a sign that Apple is putting its troubled past well behind it. For others, it's a natural progression, as most people call the company just Apple anyway.

– Jonny Evans



**OUT!**

**Last bite for world-famous Apple logo**



**Apple Computer, Inc.**

**S**teve Jobs commissioned a young art director, Rob Janov, to design the first rainbow-coloured Apple logo. Janov drew a simple, iconic apple shape, identifying it further with a leaf sprouting from the top and a deep cut cleft into the bottom. To give it scale, Janov carved a bite mark on the right side of the Apple.

Realizing that bleeding the spectrum of colours would be expensive, Janov proposed drawing a thin white line between each colour. Jobs, who had been bugging Janov day and night, decided that this approach lacked class – and so the classic Apple logo was born.

In his book, *Infinite Loop*, Michael Malone quotes Mike Scott, Apple's first CEO saying: "That damned logo was an endless headache. Non-standard colours, seven separate print runs and then varnish on top of everything to keep the colours from bleeding. God knows how much it cost Apple over the years."



Store

iReview

iTools

iCards

QuickTime

Support

KidSafe

Email

iDisk

HomePage

Account

Logout

Help

# Fortune favours our Steve

**The 'personal computer industry's chief aesthetic officer' speaks out on his new vision for Apple.**



**H**aving recently appeared on the cover of prestigious publications such as *Time* (see Macworld, December, 1999), Steve Jobs has once again achieved newsstand celebrity status, as the 44-year-old Apple iCEO has been chosen for a cover story appearing in wannabe fat cat's bible *Fortune* magazine.

The insightful article, by journalist Brent Schlender, states that if Jobs' plan for Apple works out, "Microsoft, AOL, and others will be playing catch-up with a company left for dead two years ago."

Schlender calls Steve Jobs "the personal-computer industry's chief aesthetic officer", as he catches up with him selecting iReviews icons in the boardroom at Apple's headquarters in Cupertino, California.

No detail is too trivial to escape Jobs' scrutiny as he passes final judgment on the look-&-feel – what he calls the "fit and finish" – of the series of ambitious Apple software products and Internet initiatives that he announced at Macworld Expo in San Francisco.

## Mac in the lead

The high-tech showman believes Apple has got back to the business of altering the course of the PC industry.

"I don't want to toot our own horn too much, because it sounds arrogant, but the rest of the industry is trying to copy our every move again, just like in the 1980s," says Jobs.

"Every PC manufacturer is trying to copy the iMac in one way or another. And you can bet they'll be cloning iBook next year. The same goes for our software. Our QuickTime streaming video player has this sleek, brushed-metal look on the screen. Well, a month ago Bill Gates announced that Microsoft's next Windows multimedia player was going to feature a brushed-metal interface, and that they're coming out with Windows Movie Maker. So now we've got Microsoft copying us again too. And I don't mind. I don't mind."

Apple, Jobs says: "has been a bigger company, but it has never been more capable or more profitable than today. The best thing is that we're done patching the place up. Now we're marching forward on all fronts."

Jobs is happy that Mac OS X will leap ahead of the forthcoming Windows 2000: "Think of Windows and our older Mac OS's as houses built with two-by-fours. You can build that kind of house only so high before it collapses from its own weight. So as you start to build it higher, you have to spend 90 per cent of your time going back down to shore up the lower floors with more two-by-fours before you can go on to build the next floor. That leaves you with only 10 per cent of your engineering budget to spend on actually innovating – it's why new versions of Windows

always come out way late.

On the other hand, OS X is like a software space frame made out of titanium. It is so strong and light and well designed that it lets us

spend all of

our resources

innovating, not

reinforcing the

foundations."

In the interview, Jobs poo-poos 'post-PC' devices: "All Internet pages are laid out to be viewed on a PC. That's one reason WebTV has failed. Beyond that, the Web is rich with things like Java and QuickTime and RealPlayer and MP3 sound files. By the time you build a device that [can handle those things], you've got something that is like a PC without the disk drives, and is only about \$50 cheaper than an iMac."

But the Apple boss does let slip about some non-PC development in the company labs: "I won't lie, we're working on other digital devices like everybody else. But I'm not convinced that customers won't pay a little bit more for a device that's not going to be obsolete in a year and that's going to give them the full Internet experience, not an 'Internet Jr.' experience."

## Computer revival

Jobs is bullish about Apple's future: "I don't see enough innovation like that in our industry. My position coming back to Apple was that our industry was in a coma. It reminded me of Detroit in the '70s, when American cars were boats on wheels. That's why we have a really good chance to be a serious player again."

"People are always asking, 'What will be the next Macintosh?' My answer still is 'I don't know and I don't care.' Everybody at Apple has been working really hard the last two and a half years to reinvent this company. We've made tremendous progress. My goal has been to get Apple healthy enough so that if we do figure out the next big thing, we can seize the moment."

"Another priority was to make Apple more entrepreneurial and startup-like. So we immediately reorganized, drastically narrowed the product line, and changed compensation for senior managers so they get a lot of stock but no cash bonuses. The upshot is that the place feels more like a young company."

Despite the expo's focus on software, Jobs says that Apple has some "amazing hardware in the



## Card shark

Apple's new free iCard service is another great Jobs idea for seducing potential Apple customers.

pipeline". "I still spend a lot of my time working on new computers, and it will always be a primal thing for Apple. But the user experience is what we care about most, and we're expanding that experience beyond the box by making better use of the Internet."

## Consumer focus

Apple is right to be concentrating on the consumer market, according to Jobs: "A lot of people can't get past the fact that we're not going after the enterprise market. But that's like saying, 'How can the Gap be successful not making suits?' Well, we don't make wingtips here either."

"It's really hard to serve multiple masters – different sets of customers with completely different points of view, requirements, and ways of approaching computing. I think Microsoft is experiencing this."

"I've always believed that the biggest market for PCs is consumers. The Mac was originally intended to be a consumer PC. One of the big arguments I had with [former Apple CEO] John Sculley was that the Mac was designed to sell for \$1,000."

"Yes, we overshot a little and it cost too much to make to sell for that, but even so, I thought it should have sold for between \$1,500 and \$1,799. John wanted to bump it up to \$2,499. His vision was to keep on going all the way up and have Macs selling for \$5,000 or \$10,000. After I left, that's exactly what Apple did."

"By some measures, it worked. Apple made a fortune, although not as much as we're making today. What they didn't understand was that they had thrown away one of the greatest chances they'd ever get to win market share. They went for \$1 billion in extra profits over four or five years when what they really should have done was tell everybody they would make 'normal' profits and go for market share."



# Portable plans on hold

**M**acworld Expo 2000 saw the birth of 'X' as a 21st century commodity, but no new Apple hardware announcements. Despite all the hype, rumour and guesswork, Apple's next-generation PowerBook failed to make an appearance at the San Francisco show. Whether it appears at February's Tokyo Expo is in the lap of the Jobs.

Code-named 'Pismo', the new PowerBook is rumoured to have an industrial design similar to the current model, with the possible addition of some coloured or translucent accent panels. The biggest difference, in addition to the standard bumps of clock speed, RAM and hard disk, will be the addition of dual 400Mbps, six-pin FireWire ports – at the expense of the SCSI port – dual stacked 12Mbps USB ports (running on independent buses), an AirPort slot, a low-power ATI Rage 128 video card and a new 100MHz UMA motherboard. Pismo may even feature a full-sized "glowing" keyboard, if some reports are to be believed.

**Biding its time**  
According to sources, Apple shelved a San Francisco Expo Pismo launch because there was still a large volume of current G3 PowerBooks in sales channels. The new portable professional Mac is, however, "ready and waiting" for a launch at the Tokyo show (held February 17-19). Other possible release dates include Apple's Worldwide Developers Conference (May 15-18) or the Macworld Expo in New York (July 18-21).

A now-withdrawn press release from expansion-card maker Rato Systems dated January 5 – the day of Jobs' MW

keynote speech – said the company was announcing: "the best SCSI solution for the new PowerBook 'Pismo'."

"This demonstration shows the best SCSI solution for new PowerBook 'Pismo', which has no SCSI port, and is also fully backward compatible with current existent SCSI devices," it continued.

## Policy decision

PowerBook guru Jason D. O'Grady reports that the new PowerBook "wasn't ready for prime time." "Apple has a policy of not announcing hardware that it cannot ship within 30 days, and Pismo may have slipped outside that window," O'Grady suggests. "A Go2Mac.com source assured me that a heat issue that cropped up in some early development units was fixed by repositioning a heat shield, effectively dropping the temperature to normal."

O'Grady also picked up a slip in Steve Jobs' keynote speech: "If you listened carefully, you heard Steve virtually confirm that Pismo will ship with an AirPort slot under the keyboard. He let the cat out of the bag when he said that all Apple products were now shipping with AirPort. Freudian slip?"

With Japan home to the world's most fanatical laptop customers, Macworld Expo Tokyo seems the most likely Pismo launchpad.

■ PC Data's Portables Hardware Tracking Service showed that Apple's iBook had earned the number one spot for sales among all portable computers in the US market in the last quarter 1999. Apple's portable range stole 10 per cent of all US portable computer sales in the period.

# Half-price Apple for teachers

## iMacs & iBooks part of £20m government education computer discount scheme

**A**pple enjoyed great success at January's BETT education technology show this year. First came the announcement that the company has been chosen to take part in the government's Computers for Teachers scheme.

The £20 million initiative was officially launched at BETT, where Becta (the British Educational Communications and Technology Agency) announced the list of companies that had won certification.

Under the scheme, the government will rebate teachers half the price of a computer bought from a certified supplier. The package includes delivery and installation, office software, connection to the Internet and access to the National Grid for Learning. The scheme aims to improve teachers' confidence and competence in ICT. The maximum rebate is £500.

Nineteen companies received accreditation, including Apple, BT, Compaq, Dell, Fujitsu, Tiny, and Gateway.

Apple also chose BETT as the forum to launch its new Apple Store for Education ([www.apple.com/uk/education](http://www.apple.com/uk/education)). This was designed to seal Apple's relationships with educational purchasers, helping them find and purchase products for their schools, colleges or universities. The store has a build-to-order capability.

The company also showcased its AirPort wireless technology, which gained attention as the only major wireless-networking installation at the show.

Nick Evans, marketing manager for Apple's Education division said: "It's great for Apple to be recognized by the educational community. It supports Apple's approach of designing kit with education in mind."

He claimed the company made a significant number of sales at the show, not just to educationalists but to educational vendors. "The BETT show is the now one of the major shows in Europe. Apple's continued presence there is important for its profile in the education marketplace."

More good news for Apple came from software developers exhibiting at BETT, many offering Mac-compatible products for the first time. Crocodile Clips, voted most effective resource for science by the Fischer Family Trust, is now available for the Mac. In related news a Europress spokesman said: "All future products are to be dual format."

Design Science announced it will launch its A-Level maths package MathType for the Mac this Autumn. Other companies exhibiting at the show included: Softease (with a Mac version of its Textease Multimedia DTP package), Cromwell, Semerc, Ransom, The Learning Company, Eurotalk and Humongous.

Apple's success at BETT is sure to increase the number of educational developers moving into the Mac-space.

**- Louise Banbury & Jonny Evans**



**Apple's assembly time**

Apple Education had a big presence at BETT 2000. Its centrally located stand (right) drew much scholarly attention. Left: Nick Evans, marketing manager for Apple Education, shows Michael Wills, Learning & Technology Minister (DFEE), a wireless iBook in action. Apple impressed the crowds at this professionals-only show with its interactive demonstrations of the iBook's abilities.



**A**pple's iBook won the award for Best Information Communications Technology (ICT) Hardware (Secondary) at BETT awards.

The awards, now in their second year, recognize excellence in ICT development and innovation in education across 14 categories.

Last year, Apple walked away with two awards for the iMac, again in the Secondary Hardware category, as well as in the Primary Hardware category.

This year, the Primary Hardware award went to NST's DreamWriter – a low-cost handheld computer, reminiscent of Apple's discontinued e-Mate. The winning model is not Mac-compatible, although the company does make a more basic version that can be connected to Macs. NST used the show to carry out some market research to gauge the popularity of a planned translucent lime green DreamWriter.

Software publisher Crick won the Special Educational Needs Software award with Clicker 3 – an application that uses grids for writing and multimedia. At the moment, this is PC-only software – but version 4 will be available on the Mac platform in April, according to a Crick spokesman.

Other winners included BBC Schools Online, Sherston Software, Blackcat Software, LEGO and Widgit Software.

**- Louise Banbury**

## The next Internet

**In the second part of their 'History of the digital future', Glenn McDonald and Cameron Crotty look ahead to a bigger, faster, universal Net.**

**W**hat does half a decade amount to on the Net? A lot. Just five years ago, David Filo and Jerry Yang began the Yahoo list, Microsoft registered the domain name MSN.com, and Netscape released Navigator 1.0. Today there are more dot coms than one-armed bandits in Vegas, and 150 million to 200 million people are online. What a difference the Web makes.

So how will the Internet look in five more years? For starters, the Web will be bigger, flashier, and noisier.

### Everybody in the pool

As sure as bugs in a Windows program, more users will be on the Internet five years from now. According to research firm Jupiter Communications, only 37 per cent of US households were connected to the Net in 1998; by 2003 this figure will have risen to 63 per cent – and that's a conservative estimate.

Despite the current wave of interest in broadband connections (through DSL, cable, or satellite modems), Jupiter analyst Zia Daniell Wigder says less than 25 per cent of future Internet users will connect to the Net that way, and widespread broadband use will take longer than most people expect. Analogue dial-up connections will be free for the asking, Wigder says, and broadband companies will have to sell consumers on paying for a superfast Internet connection.

But while companies duke it out for wired Net consumers, both camps risk being kayoed by technologies that let users connect with no filaments attached. A recent report sponsored by Nortel and published by the Yankee Group predicts that the number of wireless Internet users – connecting mainly through wireless telephone networks – will grow from 3 million today to 50 million by 2004.

The proliferation of users will also increase data flow. Peak volumes of data traffic have

doubled every six to eight months for the last two years.

Will the Web backbone snap under all that weight? "I don't foresee any impending blackout," says Rick Miller, Internet backbone analyst for the research firm Cahners In-Stat. Miller says that enough bandwidth is available today to accommodate growth. But some industry observers warn that the Net could get bogged down as video, audio, and other rich media become more popular. To keep up, we may need "a 100 to 1,000-fold improvement in the backbone, and each server may need to be 100 to 1,000 times faster", says Abdelsalam Heddaya, vice president of research and architecture at Boston-based Infolibria. Alternatively, Infolibria sells streaming-media software that bypasses the Net backbone altogether by duplicating Web video and audio files on ISP servers.

### The Internet, Part Two

Of course, there's a big difference between having enough bandwidth available for the entire Internet and having it available to you when you need it. As the Internet has become increasingly commercial and crowded, its original users – academics and researchers – have had a harder time accessing the communication lines. To mitigate this problem, developers of a new project called Internet2 have set aside miles of fibre-optic cable to devote to researchers' use and to serve as a test bed for future Internet applications and technologies. The project's participants – which include Nortel, Qwest, and Cisco – expect technologies developed and refined there to facilitate searches on the Internet, improve the reliability of streaming data (video, audio, and the like), and generally create a more stable Net.

Until now, the biggest obstacle to delivering high-quality multimedia over the Internet has been the straw-sized connections that funnel data through the Net. But even the narrowest consumer broadband connections will be roughly ten times faster than the average 56Kbps analogue modem. Fatter connections mean wilder,

more graphic-intensive Web sites loaded with streaming video and audio clips. Net shopping for everything from clothes to cars will begin to resemble the real-world activity, since buyers will be able to look at products in detail – probably in 3D.

Shopping won't be the only area of change. In the future, you may get most of your entertainment – movies, music, videos – and news on the Internet. Who knows? By the time George Lucas finishes the next installment of his *Star Wars* prequel, you may be able to watch the fall of Anakin Skywalker entirely from the Net.

But the greatest gains offered by broadband connections may be around-the-clock access to data, resulting in an Internet that is always on in your house. For instance, instead of having to instruct Quicken to surf your bank's Web site and download your transactions, future versions of the program may retrieve the data as the bank's computer processes it. Combine this with the trend toward home networking, and your future abode is likely to contain lots of application-specific devices – all wired to the Net. The very concept of "going online" may give way to an era of instant, universal communication. **MW**

## Next Amazon: hangin' at the digital mall

**W**hat business doesn't want to be the next Amazon.com? Lots of companies are vying for the spot, though consumer retail space online has got a lot more crowded since Jeff Bezos turned his shoestring operation into "the world's biggest bookstore." Without a doubt, every new start-up and garage geek on the planet is hoping to rake in millions through e-commerce. Not everyone will strike it rich, but one thing is certain: The electronic marketplace is on the verge of a tremendous growth spurt.

Forrester Research predicts that online retail sales will explode to \$184 billion per year by 2004, up from \$20 billion in 1999. "[The market is] going to be big," says Lisa Allen, an analyst at Forrester. She pauses for effect. "It's going to be really big."

**VR Shopping** Not only will the variety and volume of products you can buy over the Net continue to expand, but your entire experience of online shopping will evolve as well. Think virtual reality is only for games? In the future, you may stroll the aisles for a lug wrench at B&Q or finger the threads at M&S, all without leaving the comfort of your home. Indeed, services such as these are already being tested by some stores.

As bandwidth into the home increases, e-commerce could develop into far more than a point-&-click experience. Covad, a California-

based provider of high-speed DSL services, sees a day when companies will buy bandwidth in bulk, and trade it to consumers in exchange for their loyalty. "The company could communicate over a live video feed to a customer's house," says Abhi Engle, Covad's broadband product manager. Estate agents, for instance, could offer clients streaming video "walk-throughs" of new houses, a service impossible without broadband. And because DSL is an "always-on" technology, consumers won't have to dial up to shop.

**Must-Buy TV** Interactive TV, already in the test stage, is another growing e-commerce avenue. Mark Schmidt, director of marketing for IBM's Home Networking unit, pictures remote-control consoles with built-in flat screens that will allow you to watch your favourite shows and order products featured in them. Imagine watching *The X-Files* and being able to buy the shirt off Mulder's back.

"We're very close to having a touch-screen monitor that you could carry around the house with you," says Mark Dwight, a product line manager at Cisco Systems. He envisions a "flat, smooth tablet" networked to other appliances in the home and jacked into the Web. "It takes [shopping by catalogue in bed] to the next level," he says.

As for the look of future online stores, tomorrow's shopping experience is likely to



be more visually exciting and interactive. Forget about bland, 2D Web displays of widgets and bolts. Instead, look to companies like the Sharper Image ([www.sharperimage.com](http://www.sharperimage.com)) whose site (above) features a 3D image of a CD player, which you can grab with your mouse, flip around to view from all sides, and even open to take a peek under the lid.

It won't be long before the Gap or Miss Selfridge lets you upload a scanned photo of yourself to its site, then produces a scaled 3D image of you from that photo. You could then "dress" your model in various outfits to assess the style, size, or colour before you buy.

After that, it's only a short step before you find yourself virtually strolling the aisles of an online car dealership and kicking the tyres of that Saab you've been eyeing.

– Michael Grebb **MW**



DAVID ANGEL

## Next Yahoo: Wild, wild Web

**I**n 1997, Alan Ramadan introduced a new way to watch sports, one made possible by the World Wide Web. Throughout the seven-month Whitbread Around the World sailing race, Ramadan's newly formed Quokka Sports ([www.quokka.com](http://www.quokka.com)) broadcast the images and expert commentary that usually accompany sports coverage, but with a twist. Quokka added technical data (some of it in real time) such as navigational notes, boat speed, radio conversations, and email diaries written by the sailing crews. The company mixed it all up and put it on a Web site that drew 1.8 million visitors. See the screenshot, right.

Today, Quokka Sports is no longer an edgy start-up with a fistful of venture-capital

dollars. Its list of partners includes TCI/Liberty, Hearst, British Telecom, and Excite@Home. The site offers a clear glimpse of the future Web. Click on a link for the 2000 Olympics, and you'll see pages filled with a mélange of pictures, charts, bits of text, and at least one video or audio clip. Quokka also created the RaceViewer, a Shockwave application for motor sports that mixes graphs of the racers' position with textual commentary and a live video window.

Multimedia-rich Web sites like Quokka's and RealNetworks' Take5 ([www.real.com](http://www.real.com)), which gathers an array of audiovisual programming from the Web for users to access in one central place, could be the hottest draws for broadband consumers in



the future. More sites will routinely feature streaming media and 3D modeling. The software – including Apple's own QuickTime technologies – to deliver such content already exists. Site designers just need to refine it, and consumers need faster Net connections to view it. **MW**

## Apple profits soar

### Red-hot company shifts 1,377,000 Macs in past quarter

**A**pple's first-quarter profits held Wall Street's winter chill at bay, keeping investor confidence on a near all-time high. Reaction to the company's announced net profit of \$183 million was explosive, with Apple's stock becoming such a hot commodity that Nasdaq had to temporarily halt its trading. Apple's share value stood at \$112 per share following the after-hours trades.

Company revenues rose by 37 per cent, unit sales by 46 per cent and profits climbed 45 per cent. The gross results included various one-off elements, including a special executive bonus of \$90 million for CEO Steve Jobs (see page 18). Another one-off expense was a net charge of \$6 million for restructuring the company in the period. This could include redundancy payments to laid-off members of

Apple's UK marketing team – see February's *Macworld Business News*.

A total of 1,377,000 Macs were sold in the quarter, including over 700,000 iMacs and 235,000 iBooks. The revenue growth is two-and-a-half times the PC industry average, according to an IDC report. Of the quarter's revenue, 51 per cent came from international sales. During his keynote speech at Macworld Expo San Francisco, Steve Jobs said: "For the first time we're firing on



all cylinders. We sold more Macs than have been sold in any quarter in Apple's history."

Fred Anderson, Apple's chief financial officer said: "Apple finished the quarter with over \$3.6 billion in cash and short-term investments, and over \$5 billion, if the company's investments in ARM and Akamai are included."

The results did not surprise Tim Bajarin, an analyst with Creative Strategies: "Sales of iMac have been high, and typically, between 35 and 40 per cent of all Apple computers are always sold during the holidays".

Michael Kwatinetz, a research analyst at Credit Suisse First Boston in New York, said: "Apple had very good revenue growth with iMacs. We believe that iMacs were up 35 to 38 per cent year over year. Gross margins were lower than expected. This

was due to mailing costs for hardware shipped during Q4, and because Mac OS 9 sales were lower than expected."

Anderson said Apple intends to "continue to bring out products on schedule, and bring new people into the company".

Coyly, he revealed that Apple had a "pipeline of new products" ready to roll, but refused to give further details.

– **Jonny Evans and Wendy Mattson**

## Buy-outs widen Media 100's Net

**M**edia 100 continues to consolidate its position as a world leader in Internet-based digital video solutions. Following the recent purchase of Terran Interactive, Media 100 has also bought Wired and Digital Origin.

The expansion is driven by Media 100's vision of offering a suite of solutions to "make every computer a potential TV station".

John Molinari, CEO of Media 100 says: "We see the trend to Internet video and DVD distribution accelerating, and see the combined company positioned to take advantage of this growth."

Media 100 now occupies a unique position in this market. Its products support all major video-encoding and streaming architectures, including Apple's QuickTime. The Wired purchase also offers Media 100 customers a full range of MPEG streaming-media production tools, including FireWired DV (see Product News, page 37).

The Digital Origins merger gives Media 100 excellent access to the camcorder kings – Canon, JVC and Panasonic.

Mark Housley, chairman and CEO of Digital Origin said: "Our goal is to make everyone with a personal computer a potential Internet video broadcaster."

More signs of the strengthening grip of Media 100's hold on the expanding digital-video industry comes with news concerning the company's new iFinish streaming media production system.

This has been chosen by DVD authoring leader, Daiken US Comtec Laboratories, as tool-of-choice for audio and video content creation and DVD authoring.

Apple's decision to forfeit a place at Seybold, Boston is also a clear signal that it's devoting much attention to exploring markets beyond its traditional desktop-publishing community.

– **Jonny Evans**



## Business briefs

■ The UK Department of Trade and Industry is making radio spectrum licences available for the new broadband fixed-wireless Internet services. 28GHz licences become available this summer, with 40GHz licences in the autumn.

■ Scansoft is to merge with Caere, best known for its OmniPage optical character-recognition software in a \$140 million deal that should be sealed by April. The new company will retain the Scansoft name.

■ Yahoo is being sued for \$4 billion by Universal Image, which claims that Yahoo did not reveal user details of Universal's video and audio resources – sourced through Yahoo's Broadcast.com offshoot.

■ Apple's streaming-media partner Akamai is buying Californian-based Network24 Communications in a \$200 million deal. N 24 produce Qcast, a Web solution for on-demand Internet broadcasts.

■ ViewSonic has taken over Nokia's display products business. Nokia branded displays are manufactured in Pecs, Hungary. This consolidates ViewSonic as a major display manufacturer.

■ iREZ has acquired Nogatech USB products, including the USB-TV, USB Micro Cam and USB Live! iREZ will integrate USBVision NT 1004 chipset into its video-imaging line.

■ Xerox is to pursue its suit against 3Com. Its lawsuit alleges that the handwriting-recognition software used in 3Com's Palm devices belongs to Xerox.

■ Gordon Bell, senior sales manager at Formac Electronics has resigned because of "unjust business practices at the company", reports allege.

■ Motorola reported fourth-quarter earnings of \$514 million or 82 cents per share on \$8.5 billion sales. Revenue was up two per cent from a year ago.



# Style over substance

Is this what we've waited more than a decade for? After years of listening to empty promises from Apple CEO Steve Jobs, I'm distinctly underwhelmed at what Steve Jobs is now promising. For a start, if I'd wanted to run Unix as my choice of OS I could have done so at any time in the last 30 years. As for the other key features, I'm even less impressed.

So 128-pixel icons are another great Apple innovation, are they? Well, no. The Amiga operating system – which, incidentally, was delivering multitasking and memory-protection at the same time – offered such large, multicoloured icons more than ten years ago.

## Clutter stutter

The proposed Finder in a window is nothing more than Windows Explorer, and that's been one of Windows' worst features for the best part of a decade. The Dock is disturbingly reminiscent of Windows' taskbar – but, whereas the taskbar is designed to minimise clutter, the OS X Dock consumes as much screen space as possible.

Single window mode? Does anyone remember MS-DOS, where you could have only one document open at a time? In what way is a return to those days an improvement? How do you compare two documents – cut-&-paste, or

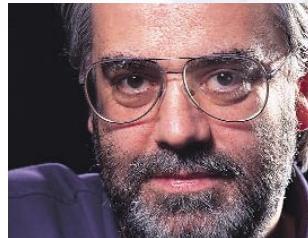
drag-&-drop – if you can have only one window open? The ability to open multiple windows was one of the key breakthroughs in OS design in the original Mac Finder, yet now Apple says single windows make life easier. Apple is wrong.

As for the visual aspects of the OS, grandiosely termed 'Aqua' by Apple's marketers, it's yet another triumph of style over substance. So much research and development has gone into Aqua that one enthusiast with a shareware utility knocked up a copy for Windows in hours.

It's difficult to remember now just how stunning the Mac OS was in 1984. Not just different, but brilliantly different – easier to use, more flexible, more elegant. Apple has had 15 years to work on its successor and, tragically, has failed to offer anything approaching that genius.

There's never been a greater need for Apple's old-style creativity. With multi-gigabyte hard disks, fast Internet connections and the daily bombardment of information, today's computers are more complex, more confusing and more difficult to manage than ever before. We desperately need genuine innovation in interface design, we desperately need a smarter OS.

But what Apple proposes to deliver falls woefully short of the requirements. OS X is a bitter disappointment.



**Peter Worlock**  
**think's it's a big**  
**disappointment**  
**after 10 years**  
**of development,**

# Substance comes later

So good, you'll want to lick it. This was Steve Jobs' faintly sexual description of the Mac's new interface ranks alongside his other super-silicon soundbites. It's right up there with his gushing over the original Mac as "insanely great".

Is Aqua worthy of such hype? Or is it hubris, covering Apple's failure to truly innovate again?

Apple's new Aqua interface is no quantum leap. But it hops over Windows on looks (all-important for many first timers), skips some silly interface conventions (for example, dialogue boxes that highjacked your system until you clicked 'OK'), and jumps ahead in terms of raw Unix power.

Mac OS X will attract more first-timers to the Mac. The pixel-perfect icons, dancing Dock, translucent windows and fast-access buttons all add up to a welcome gloss. But isn't Aqua's Mac makeover just button dressed up as glam?

Apple's been promising us a "thoroughly modern" operating system for a decade – so where's the revolutionary changes? Some might even argue that ten years on, all that Apple's given us is an excuse to buy a better, third-party mouse. Why are we still using a mouse at all?

Voice recognition may be just a whisper away, but are we ready for it? Certainly, our offices aren't geared up for voice-activated computers. Can you imagine droning Save, Cut or Paste

commands into one of those tele-headsets all day? Personally, I work best in silence. Others enjoy hardcore gabba blaring away while they bend báziers. Either way, it's "shush" to calls for a voice-activated user interface.

## Changing looms

So, the old mouse, cursor, icon, trash look likely to be hanging around for some time. And Aqua's spin is at least a nice change of desktop scenery – rather like moving to a spiffier office, with a bunch of new furniture and stationery.

Sure, most of the new features are already found in Windows 98. But Apple's interpretation is leagues ahead in terms of appeal for consumers and creative professionals alike. In offices with mixed iMacs and Power Macs, there's just one system to cope with. That means less training costs and less expenditure on tech support.

The real strengths of Mac OS X are yet to be made public. Aside from protected memory and pre-emptive multitasking, OS X is almost certain to usher multiprocessing back to the Mac. This new operating system might seem mere bells and whistles right now, but watch out for mighty four-processor Mac workstations. My guess is that Aqua is just a ripple on the surface of a much more powerful OS. **MW**



**Simon Jary says**  
**there's a lot**  
**more to come.**

Read more Jary on Aqua in his 'Read Me First' opinion column on page 5, and the feature starting on page 68.

Also: [www.macworld.co.uk/opinion](http://www.macworld.co.uk/opinion)

And let us know what you think of Mac OS X and Aqua. Write to [letters@macworld.co.uk](mailto:letters@macworld.co.uk), or join in the debate at the Macworld Forum at [www.macworld.co.uk/forum](http://www.macworld.co.uk/forum).



# product news

## SANCube squares circle on storage

**M**icroNet Technology ([www.micronet.com](http://www.micronet.com)) is squaring up to the opposition with the SANcube, the industry's first FireWire SAN (storage area network) storage solution – and certainly the best-looking disk drive since Philippe Starck worked with LaCie. The SANcube serverless storage network delivers fast connectivity – up to 220GB online – with prices starting at £1,500.

SANCube is engineered for Mac-based digital content creators who work with and transfer large mission-critical graphics files on Power Mac G3/G4 and iMac DV systems with built-in FireWire. Providing faster-than-typical network performance, SANcube delivers 30Mbps. data throughput – a transfer rate "up to ten times faster" than typical Macintosh-based 100BaseT networks, according to MicroNet.

### FireWire friendly

SANCube consists of a compact, centralized "data cube" incorporating up to six high performance IBM hard drives yielding a capacity up to 220GB of online storage.

The stylish SANcube measures just 10 inches "cubed", and visually complements Apple's newest systems. Users simply plug SANcube into their Mac systems with built-in FireWire. Since SANcube is stackable and hot-pluggable, the system expands and reconfigures as workgroup



storage requirements increase. Users can configure SANcube as a single volume by striping the data (RAID 0) across the drives for enhanced performance and capacity, or duplicate or mirror the data (RAID 1) at high speeds.

SANCube ships in March, with prices expected to start at £1,499 for the 70GB single-user system, £2,149 for the 100GB two-user, £2,699 for the 150GB two-user, and £3,899 for the 220GB four-user version.

**United Digital, 01926 810 000**

## Web-creators warm to FireWire AV/DV solution

**W**ired has announced FireWired AV and FireWired DV, solutions for Web-content creators. FireWired DV takes analogue video sources – such as older video cameras, VHS or Hi8 tapes – and converts the signals to DV for archiving or editing.

Video fed into the device is converted into digital in real time. The product works with both NTSC and PAL analogue formats. Its DV hardware codec brings DV power to any analogue video product.



FireWired AV is an external converter device that permits the conversion of analogue video to uncompressed video and audio or uncompressed video and audio to analogue outputs.

FireWired AV can also use the video mirroring capacity of Macs to display computer data on an analogue TV monitor.

The product will ship in April. UK pricing was unavailable at press time. In the US, FireWired AV costs \$299 (£180), and FireWired DV costs \$499 (£300).

**Computers Unlimited, 0208 358 5857**



### Music title strikes chord

Music tuition CD Guitar Method has been upgraded to Version 1.2. The upgrade offers dynamic, user-responsive features designed to accelerate the learning process. It has 25 new lessons, full-motion video clips of the interactive tutor and built-in accessories, including an automatic guitar tuner and recorder. For a full review, see page 60.

[www.emedia.org](http://www.emedia.org)

### Free email-client offer

Qualcomm is offering its email client, Eudora email, for free. On loading the software users can choose between three operating modes: Sponsored, Paid or Light. Sponsored gives free access but with advertising; Light gives access to a limited number of features, but with no advertising; and Paid is advertising-free but costs £30. **Eudora, [www.eudora.com](http://www.eudora.com)**



### UK debut for super-cam

Canon has announced its three-megapixel digital still-camera, the £575 PowerShot S20. The camera has a top

resolution of 3.3 million pixels. It is expected to be available in the UK in March. The camera features a 32-64mm 2x optical zoom lens and built-in buffer memory and uses a CompactFlash card.

**Canon, 01737 220 000**

### VST sounds right notes

VST has released new virtual instrument plug-ins for VST 2.0 – the Mac-music creation software. LM4

ModelE is an analogue synth that offers a 16-note polyphonic synth for Cubase users. Using the Pro-5 through Cubase gives its full range of facilities. Both plug-ins are £127 and require at least a 604e processor and 64MB RAM.

**Arbiter, 0181 970 1909**

#### Nice form

Auto.des.sys has released version 3.5, its form.Z modelling software. New features include direct access to the Web, right-to-left text – such as Arabic and Hebrew – and transformations about object centroids. The Status Objects palette has been re-introduced, and



three items have been added to the Help menu. The update is free for subscribers to the company's annual service plan.

**Gomark, 0171 730 7930**

#### Damage control

Alsot has updated DiskWarrior to version 2.0. The disk-repair utility now prevents disk damage with a DiskShield feature, which checks the validity of data being written to the directory. It also alerts users of existing damage and prevents it from escalating. The Directory Optimization Grapher, incorporated into DiskWarrior, determines the state of fragmentation of the directory. A free copy of PlusOptimizer disk-optimizing software ships with every Diskwarrior CD. It costs £55.

**Softline, 0181 401 1234**

#### QPS speeds on

QPS has introduced a SCSI version of its Qu! Drive. The Qu! SCSI drive features a 12x CD-R recording speed, 4x CD-RW recording speed, and, 1x to 32x rotational-read speeds. It can read/write data and record music on CD-R and CD-RW media. It has a 4MB RAM buffer and an average access time of 160ms. The drive, priced at £359, comes with Toast and Direct CD software, PCI 32-bit SCSI-II controller, CD-R and CD-RW media. The company also has a 8x20 CD-R drive for £275.

**Channel Dynamics, 0870 607 0540**

#### Causing a commotion

Puffin Designs' Commotion has been updated for the G4. Version 2.2 has support for the Velocity Engine, resulting in an improved Motion Tracker and Color Balance filters. The update can also retouch mattes with the FX brush and control b-spline tightness. Commotion costs £1,695. The update is free to registered users of version 2.1.

**BIT, 01420 83811**

## Rivals in monitor double

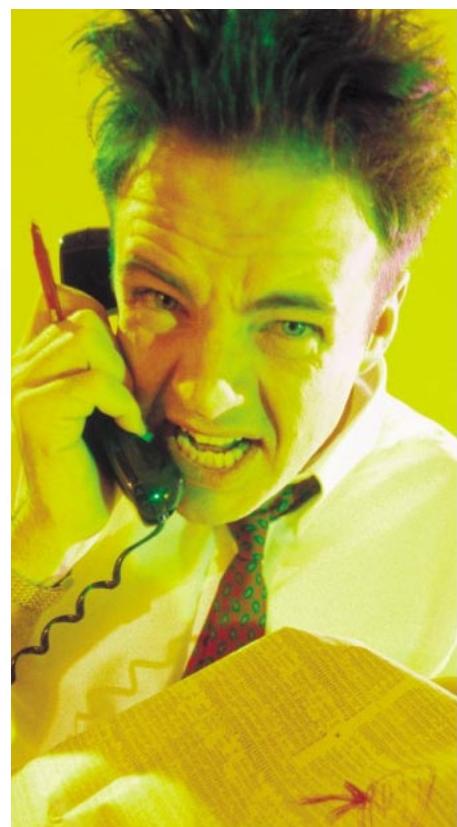
Samsung and Iiyama have each rolled out new monitors. Iiyama's new 17-inch (pictured) S700JT1 monitor has a 0.28mm dot-pitch, a horizontal scan-rate of 27-70KHz, and a maximum flicker-free resolution of 1,024-x-768 pixels.

Samsung is shipping a range of SyncMaster screens for graphics users. Spearheading the launch is the 21-inch SM1100plus. The £635 monitor has a maximum resolution of 1,800-x-1,440 at 76Hz.

In the 19-inch range the SM900SL (£381) and the SM900SLplus (£400) have a 240MHz bandwidth and a horizontal frequency of 110Hz.

For the 17-inch range, there is the new £250 SM750p, and the £316 SM700IFT.

**Iiyama, 01438 314 417**  
**Samsung, 0800 521 652**



Comstock is shipping Business Impacts, a royalty-free images CD. Priced at £199, the disc contains 104 business-related photographs. Other discs in the range include Fotofonts, Urban Geometrics and Studio Archeology.

Comstock, 0171 351 4448

## That SCSI feeling

Adaptec has announced a new CardBus adaptor, bringing SCSI connectivity to PowerBook users.

The PowerDomain SlimSCSI 1480, launched at Macworld Expo, uses the PowerBook's PCMCIA slot to deliver speeds of up to 20Mbps – a four-fold speed hike on the PowerBook's current built-in SCSI. It works with SCSI Manager and SCSI Manager 4.3, so both new and legacy SCSI devices can be used. At the show, Adaptec also showed its latest Ultra 160 SCSI card – the PowerDomain 29610N. This single-channel card replaces the company's earlier products – the 2940 U2W and the 2940 UW. UK prices are unavailable.



## Mirror image

VerMedia Microsystems is shipping iMaxEdit and USBPresenter. USBPresenter mirrors computer screen images to TVs, or other video-display and recording devices. It's designed for corporate training and presentations and offers video display at 30fps.

iMaxEdit is a USB device for video editing and transferring video images between any USB equipped Power Mac and TV or videos. It comes with editing software for enhancing video clips. UK pricing was not available at the time of going to press.

**Ingram Micro, 01908 260 422**



#### Causing a commotion

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**BIT, 01420 83811**

## Canon jets into software market

Canon announced two new BubbleJet printers at Macworld Expo, where the company also announced plans to produce Mac software.

On the software side, Canon Photo Gold and Canon Photo are applications for manipulating digital images. The software features a one-button QuickFix that automatically adjusts the highlight and shadow ratio, manual tools – such as cropping, colour fills, cloning and dust removal – and options for sharing and printing photos. Photo Gold includes Spin Panorama for creating panoramic QuickTime movies, and Spin PhotoObjects for creating 3D views of objects.

The company's hardware announcements included the BJC-85 Color Bubble Jet – a portable printer for iBooks and PowerBook G3s. It sports a blue lid and boasts a 720-x-360dpi resolution. The £219 printer has USB and Fast IrDA interfaces, prints at 5ppm in monochrome



and 2ppm in colour. It weighs 3.1 pounds.

The second bubble jet printer is the £119 BJC-3000. This USB printer delivers colour prints at 4ppm, monochrome at 9ppm, and has a resolution of 1,440-x-720 dpi. It supports Canon's Drop Modulation Technology.

**Canon, 0121 680 8062**

## Umax fires-up scanner

Umax has announced PowerLook 1100, a Macintosh scanner that supports FireWire/IEEE-1394 standards. This, according to Umax, is the first "FireWire-dedicated" scanner.

The PowerLook 1100 eliminates some of the difficulties with SCSI-based scanners – such as, the need for SCSI termination devices or pre-assigned addresses.

The PowerLook 1100 features 1,200-x-2,400dpi resolution, a transparency adaptor, auto-



detect frame holder for automatic scanning of up to a dozen 35mm slides, and batch-scanning capabilities. It delivers hot-pluggable connectivity without the need for a host card, and can be connected to multiple Macs. The scanner is designed for use on systems with a FireWire port, including the Apple Power Mac G4 and G3 and the iMac DV. No UK price was available at press time, but the product will be available by February. It costs \$999 in the US.

Umax UK, 01344 872 800

## Coda catering for music rookies

Coda Technology has released a Mac version of its PrintMusic software, for creating and printing sheet music. PrintMusic 2000 is aimed at first-time music notation buyers, and is compatible with the latest version of its parent software, Finale 2000.

A set-up Wizard lets users select instruments, then sets up the score on any page-size specified. Staff names, transpositions (including chord symbols), groupings and clefs are all automatic. The software can also fit lyrics under the correct notes, and enter guitar fingerboards.

An Expanded Playback option scrolls along the music as it plays.

**Et Cetera Distribution, 01706 228 039**



**First time**  
PrintMusic 2000 automates groupings, clefs, transpositions and staff names.



#### United colours of Wacom

Wacom has announced that its Graphire USB-input system, priced at £72.33, is now available in the five iMac colours. The new Graphires also feature a colour-coordinated scrolling wheel on the cordless mouse, and matching tones on the pen's buttons and eraser. The Graphire mouse has a 1,015 lines-per-inch resolution.

**Computers Unlimited, 0181 358 5858**

#### ColourPress shipping

UK developer TypeMaker has launched ColourPress, for colouring and outputting high-resolution bitmap scanned artwork. Using standard Adobe Photoshop tools, colours from a customized library of CMYK colours can be applied to selected black or white areas of a scan. ColourPress files are up to 99 per cent smaller than the original CMYK EPS format. Costing £2,250, ColourPress files can be placed into QuarkXPress, or other page lay-out applications.

**TypeMaker, 0121 604 1234**

#### Sanyo projector

Sanyo has launched a new XGA projector, the PLCXP07. Featuring 1,300 ANSI lumens, it offers XGA resolution with automatic intelligent SXGA digital compression. The projector has a 16x digital zoom, remote-powered zoom, built-in amplifier and speakers, freeze function and screen blank function.

**Sanyo, 01923 477 220**



#### Pack your suitcase

Extensis has unveiled Suitcase 8.2, an update of its font-management software. Version 8.2 includes Suitcase Server and three free connections, so that fonts can be synchronized for a workgroup of three designers. The software has also been upgraded for compatibility with Mac OS 9, and includes a new version of MenuFonts. Suitcase 8.2 costs £80, with free updates available to users of version 8.

**Computers Unlimited, 0181 358 5858**

# product news

## CDs and books

### iMac book first in range

IDG Books has introduced a new series called CliffsNotes, a range of titles costing £6.99.

The first Mac-related title is *Using Your First iMac*. This "instant knowledge guidebook" provides time-saving information on how to get familiar with the iMac and the

Apple operating system, presented in a simple, user-friendly manner.

**Transworld Publishers,**  
**0181 579 2652**



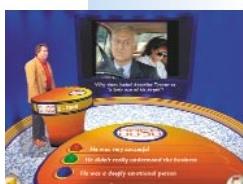
### Morse the merrier

Eurotalk, the makers of language-learning CDs, has produced its first interactive DVD, called Advanced English. The DVD is based on Carlton's movie Sins of the Fathers,

starring John Thaw as, inspector Morse. Priced at £34.99, the DVD includes full versions of the film –

in which students can take a star role – as well as games, activities and exercises aimed at developing language skills and vocabulary.

**EuroTalk, 0171 371 7711**



### Be a Photoshop whizz

Wizzthru has released a one-day self-instruction training course called The Essential Features of Adobe Photoshop 5 for Macintosh. Aimed at artists and designers new to Photoshop 5.0 or 5.5, the instruction course is provided on four audio CDs, as well as a CD containing the Interactive Guide and on-line documentation. It is available for the introductory price of £95 until March 31, after which it will be £125.

**Newton Park, 0131 343 2254**

### Trainspotting for tots

Sherston's latest release, Number Train, is an interactive CD based on the Numeracy Strategy for Reception and Year One. Number Train is fully narrated with clear interfaces. It costs £42.95 for a single user.

**Sherston Software, 01666 843 200**

# Stops pulled out on AppleWorks 6

Among Steve Jobs' keynote announcements at Macworld Expo was AppleWorks 6, with the new version boasting 100 new features and a revamped interface.

AppleWorks is a set of applications within a single program. It has powerful word processing, drawing, painting, spreadsheet and database capabilities.

Version 6 also has a Presentation environment, which uses AppleWorks' QuickTime-enhanced multimedia capability to, for example, import iMovies into presentations.

AppleWorks 6 comes with 128 templates for slides, which can also be created from scratch. The software aids the importing into presentations of tables, charts, clip-art, spreadsheets and digital photography.

Interface improvements include a new Starting Points window, giving easy access to documents and Web content, while AppleWorks Assistants helps create a new project.

Also, if an AppleWorks document is posted on a Web site, it can be made available to others on the network via the Starting Points window.

The button bar has been updated, and is now



### Movie maker

QuickTime movies can now be imported into AppleWorks 6.

context-sensitive and customizable. There are now 150 buttons, many of which can be used to launch macros, documents, Web sites or applications.

Integration with the Internet is a key feature of AppleWorks 6. Free access to an online library of 25,000 vector clip-art images is included, and can be accessed without the user having to launch a browser or decompress files.

**Apple 0800 783 4846**



Corbis has added 12 £190 royalty-free Photo CD titles to its Master Collection series, each offering 1,200 new images. Among the titles is Young and Hip. Corbis, 0171 278 1387

## Epson scan-do

Epson has unveiled the £639 Expression 1600 flatbed scanner. There is also a professional model, costing £839. The scanner has USB and SCSI interfaces as standard, with an optional IEEE 1394 (FireWire) interface for Mac G3s and G4s.

One of the Expression 1600's key features is Micro Step drive, enabling it to scan by "half-stepping" in the vertical direction – doubling resolution to 3,200dpi.

Other features include a dual-focus system that provides pinpoint focusing for reflective and transparent media by changing the focal distance to 2.5mm above the glass scan-bed. This eliminates the problem of "Newton rings".

It also boasts Dynamic Range Control for transparencies and simultaneous RGB scanning.

The Expression Pro comes with a transparency unit as standard. Bundled software includes Adobe Photoshop LE and Xerox Textbridge Classic.

**Epson  
0800 220 546**



### Good news from Aladdin

Aladdin is shipping Intellinews 2.0, a \$20 tool for delivering news, weather, sports and stock data to the desktop via the Internet. Headlines are gathered from leading Internet news sources in various categories, and delivered to the Intellinews toolbar interface outside the Web browser. With the News Headlines feature, the headlines are updated once every 15 seconds.

**Aladdin Systems, [www.aladdinsys.com](http://www.aladdinsys.com)**

### PressReady printers fillip

Adobe has expanded its support of USB-compatible printers through the PressReady Internet Update Program.

Now, Adobe PressReady supports the Epson Stylus Color 900 – Epson's fastest ink-jet



printer (left) – and the Stylus Photo 1200, both of which offer SCSI and USB connectivity. The printer drivers are ready for download for registered PressReady users from Adobe's Web site, [www.adobe.com](http://www.adobe.com).

### Starry Night for starters

Sienna has followed the release of its astronomy software Starry Night Pro with a beginner-friendly version, Starry Night Backyard. With this £42.50 stargazing program, users can learn how to identify stars, planets and constellations, watch phases of the moon, trace the orbits of planets and comets, and print detailed star charts. There are links to [www.LiveSky.com](http://www.LiveSky.com), and each screen view can be exported in standard formats.

**Guildsoft, 01752 895 100**

### Projector's high-end aim

Liesegang has released a new projector, the dv225. Priced at £3,118, the projector has 800 ANSI lumens image brightness, and an 800-x-600 pixel (SVGA) resolution. It also features intelligent resizing of other resolutions. Weighing 4.45kg, the dv225 offers automatic synchronization,



electronic magnification, LCD with micro lens for best possible light output and infrared remote control with a laser pointer.

**Liesegang UK 01924 423 3331**



### Features

IE 5 has improved features, like Internet Scrapbook (left), and new ones, like Collapsed toolbar (right), that saves on screen space.

# Return to render

**M**icrosoft unveiled its new Mac browser, Internet Explorer 5, at Macworld Expo. The software has a new rendering engine, new functionality and a re-designed interface. The company also expressed its intention to release Mac OS X-native versions of Internet Explorer, Outlook Express, and Microsoft Office in the future.

The new rendering engine supports essential Internet standards and displays accurately rendered Web pages. It also displays text more clearly by automatically adjusting the resolution to 96dpi, instead of the Mac-standard 72dpi.

Another new feature is the Auction Manager, which helps track and complete multiple Internet auctions simultaneously.

The new Internet Scrapbook is a feature to appear in the Mac version first – this is found on the Explorer Bar and captures complete Web pages, images, e-commerce receipts or links, and stores them for future reference.

Microsoft imitates the Mac's "style and elegance" with the new browser interface, which reflects the design of the iMac and iBook. The interface is customizable, and the colour can be changed to match the user's Mac. The Media Toolbar is integrated into the browser interface, and can be used to listen to Internet music, or to tune in to streaming audio and video broadcasts.

Internet Explorer 5 will be available for free download in March.

**Microsoft 0870 60 10 100**

# Video buffs get tooled-up

**E**skape Labs introduced four new USB video devices into the UK market at Macworld Expo. MyTV is a £149 TV Tuner and video-capture device for iMacs or G3s. Users can watch TV in a scalable window while running applications, or watch in full-screen TV mode.

Next in the product range is the £119 MyCapture II. This uses Motion JPEG (MJPEG) hardware compression to capture full frame-rate video over USB, and is bundled with Strata Video Shop digital video-editing software.



The third product, MyVideo, offers video-capture and output. Users can digitize standard analogue video, edit and record back out on standard video devices, or play back to TVs or video monitors.

MyView is a £119 video mirroring device for displaying the Macintosh desktop on standard TV, PAL monitor or video projector. It mirrors an active 640-x-480 desktop and routes it out over USB, without the need for a video monitor connector.

**AM Micro, 01392 426 473**

# LaCie looks to hit Mac punters in the pocket

**L**aCie launched PocketDrive at the Expo in San Francisco. Available in 6, 12 and 18GB capacities in the UK, these hot-pluggable pocket-sized drives combine impressive storage capacity with both USB and FireWire support.

The PocketDrive is compatible with all of Apple's current

product lines. They can also accommodate a bootable operating system. The FireWire controller is a 4000bps interface, and runs at more than 11Mbps – fast enough for video capture. PocketDrives cost between £299 and £599.

LaCie, 0171 872 8000



## David Fanning

Apple is wooing new users at the expense of servicing Mac old-timers – and it's no bad thing.

# Flog some, jet some

**N**ow that Apple is fully recovered from the dreadful state it was in during the mid-Nineties, is the company now getting too big for its boots? Apple is enjoying a boom-time, with only good things predicted by analysts – good news for those of us who remember the gloomy days when the Mac maker appeared to be on the brink of destruction.

However, this success comes at a price: Apple drifting away from its home-brewed computer roots and becoming a big corporate bully.

Steve Jobs, founder and notable hippy entrepreneur, was famous for his cruel treatment of IBM "suits". Although not quite yet a "suit" himself, his corporate credentials are becoming more pronounced. Even at the height of his earlier successes, it was difficult imagining Steve in the possession of a \$40,000,000 Gulfstream V executive jet. He was more likely to be seen scruffy and barefoot screaming blue murder in the R&D department.

The New Steve has no such hang-ups about conspicuous wealth, and is expecting delivery of his jet any day now – courtesy of an admiring Apple board (see page 18). Perhaps he will paint it like his old VW Camper Van.

Another measure of Jobs' success is Apple soaring stock price. He has 10,000,000 share options available to him at a price of \$97 – meaning that, for every dollar Apple's share price rises over \$97, Jobs earns \$10,000,000. At press time, the share value was \$120, but some analysts think this could go as high as \$145. If it does, Jobs would be looking at half a billion dollars. I wouldn't be surprised if he didn't even bother to pick up his \$1 official pay cheque.

In mind of the confusion and changes to the G4 line before Christmas, I was expecting the company to at least show a smaller profit for that quarter. Instead, Apple posted its highest year-on-year growth for a decade. It seems invincible right now.

So maybe it is understandable that Jobs' thoughts are not with us "little people". – But the truth is, Apple's change in attitude stretches back longer far longer than this

Some say the company has become so successful at attracting new users that old, faithful Mac people are being – at best – taken for granted and – at worst – treated with utter contempt. So what happened to all the disgruntled long-time Mac owners? Perhaps they now represent such a

small sector of the Mac market that they don't make a difference. Both my mother and mother-in-law bought iMacs last year. They both use email and browse the Web, but I bet neither of them ever look at Mac Web sites.

The reason, is they aren't computer people, so why should they care whether some Mac configurations changed last year, or if Apple pulls out of the UK Expo? If you own a Sony TV you don't care if Sony's CEO gets a new jet for Christmas, or if Sony changes the design of the remote control of new models.

Steve Jobs understands this, which is why you're more likely to see an Apple ad on TV or in a Sunday paper than in the computer press. Apple has ample evidence of just how much inept management and shoddy service thick-skinned enthusiasts will put up with. It has washed its hands of us and is content to grow its market share, rather than pay attention to its loyal following.

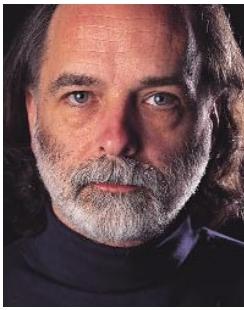
Although Apple's consumer drive is undoubtedly frustrating for many old Mac hands, the benefit is that Apple is making inroads into mainstream computing. This has a positive knock-on effect for the old hands too, because Apple is consistently coming up with new and increasingly fabulous computers and software – not because a few enthusiasts demand it, but because the general public is lapping it up in their millions.

Having a bigger market share is good for all of us. If loyal fans are being passed over for the prodigal sons of the computing world, so be it. At least we are guaranteed a place in the market.

The more non-enthusiasts that buy Apple, the more applications we are likely to see on the shelf. The more R&D budget there exists, the more cool stuff we get to enjoy. So, if you have a Mac and claim to be a Mac enthusiast – but you can't remember when you last bought a new Model – perhaps it's time that you considered joining the newcomers.

After all, you can hardly complain about a company if you aren't a customer – and a five-year old Mac just doesn't count these days. It's not just Mac newcomers that have helped Apple over the past two years, it's people buying replacement Macs too.

So don't ask what Apple can do for you, ask what you can do for Apple – and don't begrudge Steve his new plane. **MW**



## Michael Prochak

Gates may be Microsoft's new software chief – but he won't write a line of code.

# New Bill of writers?

**A**s someone who could never quite decide what they wanted to be when they grew up, I have managed to indulge a number of my interests over the years and even, on occasion, turn them into paid work. However, as someone incapable of following a trail, I still tend to proceed by impulse and can't really follow a single idea for long. But even with all the apparent variety of working as a writer, consultant, media producer, musician and all-around fool, what keeps the deception going is the fact that most people still mistake strokes of luck for skill, and mistakes for strategy.

Cocteau once said that to be gifted is to be lost, unless one sees clearly in time to level the slopes instead of sliding down them all. He also claimed to know to what extent he could go too far, and suggested that how to conquer a gift should be the main study of anybody who recognizes one in himself.

On the surface, one might be tempted to say that Bill Gates has finally discovered that being a legend doesn't necessarily keep fools at a distance. Personally, I would still argue that there's a difference between being gifted and simply being successful or famous. However, while uncle Bill has apparently decided it's time to level the slopes, I'm still not convinced that he's grasped the moral concept of going too far.

The news that he's decided to step down as CEO of Microsoft (see News) has been met with predictably mixed reactions. For some of his rivals and critics, this will be a time for small and relatively feeble celebrations. But despite the short-term cheery bravado, the giant has not been toppled from the beanstalk and the more pensive and reflective among us will be wondering just what uncle Bill has up his sleeve.

Throughout his career, Gates has been credited with the ability to maintain a perspective on the IT industry, even though, for the most part, that perspective always retained his own personal and manipulative Borg-like touch. But while uncle Bill enjoys a new-found liberation – basking in the lame title of chief software architect – we should maintain a healthy curiosity and scepticism as to the real intentions and ramifications of this apparent mid-life career shift. Microserfs like to believe that stepping slightly out of

the limelight will give him the opportunity to drive Microsoft forward in a new direction with increased agility. A more balanced view might suggest that he's simply had enough of the pressure and attention that being king of one of the world's most powerful companies brings; that his new role allows him to dodge the incoming flak from the Department of Justice, while quietly slipping into the evil shadows of geekdom where he can continue to pull the strings.

So, just what will Bill be doing in his new guise as chief software architect (CSA)? Although there'll be much marketing spin to the contrary, I'd bet real money he won't write a line of code. His formula for success has always been more akin to ram-raiding, or the smash-&-grab school of acquisition. Among the areas pundits suggest Microsoft will concentrate on are user interfaces, natural-language processing, programming paradigms, schema and file systems – which, disturbingly, could overlap much of what Apple has always been particularly good at.

Microsoft also is apparently doing work on even more futuristic interfaces, including 3D interactive user-workspaces. The company's even been dabbling for quite some time with "virtual worlds" inspired by the MUDS game concept, and "telepresence", a next-generation collaboration scheme. Interestingly, Gates hasn't made any claims about looking to invent the next great operating system – since he obviously thinks he's already done that. Also, somewhat surprisingly, he hasn't claimed making better Internet bandwidth as a personal priority.

OK, sometimes we all need a change. But who actually makes that change determines the extent and the impact of it upon the rest of us. Steve Jobs can drop the word "interim" from his title, and everyone in Mac-land is happy. Bill Gates can become a CSA and a lot of people lacking that sheep-like instinct become nervous.

I could decide to ditch computers, and write novels and poetry and no-one would really notice. But then again, I'm too old to grow-up. In our mad digital dash for cash – where the secret of success is getting away with it – there'll always be the tendency to confuse the moralist with the moralizer. And, as Jean Genet once said: "To watch our heroes live and to pity them is not enough. We must take their sins upon ourselves and suffer the consequences." MW



# reviews

## Apple's free Web-tool box



### iTools

**Publisher:** Apple  
[www.apple.com](http://www.apple.com)

**Pros:** Costs nothing; handy online storage; easy-to-use Web space; can personalize iCards.

**Cons:** Not aimed at users outside North America; KidSafe is too safe.

**Price:** Free.

**Star Rating:** 8.3

There are now almost as many products with an "i" prefix as there are bugs in Windows. The latest addition, iTools, is a suite of Web-based software tools for Mac OS 9. Most free things are worth only what you pay for them – nothing. iTools, though, is not only free, but also useful.

#### Basic email

The first of the four iTools is email, from mac.com. There's nothing clever about this – it's just an email account. As soon as iTools was announced, there was a gold-rush for the good names – started by Steve Jobs, who can be found at [steve@mac.com](mailto:steve@mac.com).

UK users may have been disappointed when trying to get an iTools account. A Zip code (US postcode) is required in order to register – no use on this side of the Pond. This isn't the warmest welcome to iTools, but there is a work-around: just add any valid code – such as 90210 (Beverly Hills, CA), or, my favourite, 95014 (Infinite Loop, Cupertino CA – home of Apple).

KidSafe

Make the Internet safer for your kids. Click Edit Settings to manage KidSafe settings for individual users. You can edit web site access, as well as access to Internet games and services.

**KidSafe on sentry duty**

Parents the world over are concerned about their children having unsupervised Internet access. Even parents savvy enough to put Net-nanny software in place may not be a match for 12-year-old hackers.

**Innocence kept**  
With KidSafe and Mac OS 9's Multiple Users, you can be sure your children won't see offensive porn sites.

## From desktop to iCard in minutes



#### Sending personalized iCards is easy.

- 1 Mount your iDisk on your desktop, and copy some .jpg or .gif images to your picture folder.
- 2 Go to the iCard page and select the option to personalize a card.

- 3 Choose an image from your own gallery of images and fill in the details.
- 4 Send your iCard to family, friends and anybody else who might want to look at pictures of your cat.

It's nothing short of idiotic that this is available only in North America. The reason is that, in North America, data is a valuable commodity: good profiles of Apple customers represent millions in potential e-dollars. Although Apple claims iTools will "go global", by the time the rest of us get it, we'll already be using it – via a dodgy ZIP code.

The actual account is slightly different from other Web-based email systems, because it isn't Web-based: it's a normal POP/IMAP server – the same kind of mail most ISPs use. This means an email application and ISP account is needed to receive mail. There is, though, an automatic set-up for Outlook Express 5 (OE 5): simply click on the Set-up OE 5 button, and it does the rest – both impressive and convenient. If you already have an email account, you can either forward the mac.com mail to it, or, even easier, check both accounts from Outlook Express.

Setting up KidSafe is easy, but using it is less rewarding. It works by nominating KidSafe sites that can be viewed, rather than choosing ones that can't. This limits the number of sites available. Granted, there are 55,000 of them, but this is a tiny fraction of the one billion pages out there.

It'll be frustrating, even for a child, to be excluded from sites that are patently safe, yet do not get the Apple seal of approval – especially so with Apple's US-centric history. For example *Macworld's* own site, [www.macworld.co.uk](http://www.macworld.co.uk), is not on the list of approved sites – although there's a way of

#### MACWORLD RATING

★★★★★/9.0-10.0 = EXCELLENT

★★★★/7.0-8.9 = VERY GOOD

★★★/5.0-6.9 = GOOD

★★/3.0-4.9 = AVERAGE

★/0-2.9 = POOR

#### MACWORLD POLICY

At Macworld, we don't think our readers should have to worry about whether ratings are based on a real product or a prototype. Therefore, we simply don't rate products unless they are real, shipping versions – the products we rate and review are the same products you end up buying. All prices exclude VAT, unless stated.

#### MACWORLD JACKPOT

The Macworld Jackpot gives you the opportunity to win some of the products we review. Simply dial the number indicated on participating reviews. Calls cost 60 pence per minute. Winners are selected by computer the day after the closing date.

adding particular sites to KidSafe, but this must be done one site at a time.

KidSafe is certainly safe, but it may be more trouble than it's worth for anything beyond homework projects.

One way that Apple could rapidly increase the number of registered KidSafe sites would be for it to get its iReview staff to register sites as they are reviewed. Currently, even the top sites that are reviewed are not in the KidSafe register.

#### iDisk makes the difference

The one iTools feature that makes it worthwhile is iDisk, which gives 20MB of storage that can be used for any files – including your very own Web site. Once signed up to iTools, iDisk can be mounted on the desktop. From this point, it can be used as a network volume for back-up, shared files, movies or Web galleries.

The best thing about iDisk is that it allows one to shuttle files between home and work. I can copy a file to my iDisk from work, and then download it when home. There's also a publicly shared file that others can access. This makes sharing anything – from digital pictures to work projects – easy. Remember, though, other users also need to have Mac OS 9 and iTools to take advantage of this.

Initially, your iDisk is split into folders for documents, pictures, movies, public and sites. You don't have to stick to this, but it will help you publish information easily.

Most ISPs have an amount of free Web space included – not that many people use it. This requires special software and knowledge. iDisk is simple, convenient and beats the pants off most other free Web-space titles.

#### Web-editing made easy

The perfect addition to iDisk is iTools' HomePage. This is a simple Web-based tool for building a personalized home page.

A fully animated, Java-stuffed Flash extravaganza is beyond it, but for saying who you are and for displaying family snapshots for far-flung relatives, it's ideal. No knowledge of Web design is required.

The first step is to copy selected pictures or movies to iDisk, so when visiting the HomePage there's material to work with. Next, decide what kind of Web page you want. The choice is between Photo Album, iMovie Theatre, Invites, Announcements, Baby and Resumé. Once the category is selected, HomePage will search iDisk for suitable files and offer to display them – leaving you to pen titles and captions.

The page can then be previewed, and publishing is achieved with the click of a button. Your Web site address will be something like [www.homepage.mac.com/yourname/gallery.html](http://www.homepage.mac.com/yourname/gallery.html). Other pages are simple forms that are filled out and published in the same way. Although templates are flexible, Apple should consider adding to the options. If it doesn't there'll be an

abundance of identical-looking sites out there. Apple could run an ongoing competition for iTools users to design a Web template for the HomePage site. This would supply a constant stream of original pages, without costing Apple a penny.

#### Macworld's buying advice

It's hard to criticize a product that costs nothing. Even if you don't use all its features, some are bound to come in handy.

If all you want is to stake a claim for your own name, it's worth getting a mac.com address. Also, if you've a particularly complicated email address – as with Compuserve's numerical addresses – there are advantages to having a mac.com address. If you use email from work, and like to change jobs from time to time, then iTools is also useful.

Although tiresome, KidSafe does have its place. Older children will become frustrated by its limitations – and not because they want to access filth and violence.

HomePage is a great feature that offers a way to get a Web site up within minutes. It's best suited to pages designed for use by friends and family, rather than the general public or your company's clients.

However, I know my Stateside mother-in-law will enjoy being able to see pictures of her far-flung family more often. So, if you thought you could get away without buying Mac OS 9, think again.

**David Fanning**

## Web-publishing made easy

First choose the kind of page you want to make – options include your resume, a photo album or an iMovie. Once you have a template it's as simple as filling in the gaps – whether it's text or pictures of

your favourite relative. And finally, hit the button to publish your site, it's live before you know it – if only publishing Macworld Online was that easy.



## Versatile Web cam



### QuickCam Pro

**Manufacturer:** Logitech (0181 308 6582)

[www.logitech.com](http://www.logitech.com)

**Distributor:** Micro Anvika (0171 636 2547)

**Pros:** Simple installation; versatile; inexpensive.

**Cons:** Average image quality; focusing can be cumbersome.

**Price:** £99.95 (including VAT)

**Star Rating:** ★★★/6.9

**F**irst things first: Logitech's QuickCam Pro won't send any digital cameras or camcorders to the breadline.

The latest version of the camera, that first sprouted under the Connectix family tree, can't touch the image quality and sharpness of a digital-still camera or a camcorder. But the USB-only QuickCam Pro is more versatile than either device. It's ideal for snapping still images of your soon-to-be-auctioned Beanie Baby collection, for video-conferencing in conjunction with a product such as iXL's iVisit, for making QuickTime movies, or even for creating a Web cam. And the price is hard to beat: £99.95, including VAT and software for both Mac OS and Windows.



#### Image-in that

*The USB QuickCam is more versatile than digital cameras and camcorders.*

The QuickCam Pro shares its ancestors' unique shape: it looks like a cue ball with a lens. But, while its predecessors sat awkwardly in a chintzy plastic stand, the QuickCam Pro includes a slick base that can sit atop your monitor or, via a spring-loaded mechanism, clamp onto a desk or shelf. You can also pop the ball out of its base and mount it on a tripod. The camera accepts snap-on lenses; Logitech sells a lens kit that includes wide-angle and telephoto adaptors.

As for software, the camera includes two simple programs. Cyberauctioneers

will make good use of QuickPICT, which snaps still images, saving them to the Clipboard, or to disk. QuickMovie captures QuickTime movies at frame sizes of up to 640-x-480 pixels and frame rates of up to 30fps – expect rates closer to 15fps on most Macs. A time-lapse feature can snap an image at intervals you specify.

The camera works very well, although focusing is difficult, particularly at 640-x-480 pixels, where there's a noticeable delay between image updates. As for the image quality – let's just say it's great for the price. We wouldn't hesitate to recommend a QuickCam Pro image for an auction site, or a family or school project. For more demanding applications – well, we would hesitate.

The QuickCam Pro also works with other QuickTime-compatible software, such as Rearden Technology's SiteCam

#### Macworld's Buying Advice

If you already have a video camera, a USB-based capture device – such as XLR8's InterView – may be a better bet. And, if all you need are still images for a Web site, you might consider a low-end digital camera. But, if you want one inexpensive device that lets you grab everything from decent-quality snapshots and Web-cam images, to time-lapse movies – and that works on either the Mac OS or Windows – you can't go wrong with the QuickCam Pro.

**Jim Heid**

## Wireless mouse



### IntelliMouse Explorer

**Manufacturer:** Microsoft (0345 002 000)

[www.microsoft.com](http://www.microsoft.com)

**Pros:** Doesn't require cleaning; works on almost any surface; multiple programmable buttons.

**Cons:** Relatively expensive.

**Price:** £49.99 (including VAT)

**Star Rating:** ★★★★/8.2

**U**nless you work in a NASA clean room, your mouse will eventually fall prey to mouse crud – a build-up of lint and other dirt in your mouse's moving parts that makes the cursor skip and jump on screen.

Although periodic maintenance helps, some mice never seem to return to perfect working condition, even after a thorough cleaning. Microsoft's IntelliMouse Explorer, finally available for

USB-enabled Macs, solves this problem – by eliminating dirt-trapping components entirely. The IntelliMouse worked as advertised on just about everything I put under it – from my laminated desktop, to plain paper, to the top of my head. The optical sensor won't function on glass or any highly reflective surface, however.

Instead of the balls and rollers found in conventional mice, the IntelliMouse uses a novel system that tracks movement optically. While this technology isn't new, previous optical mice required a special mouse pad. As you move the IntelliMouse, an image sensor on its underside scans for minute variations in the work surface, which the sensor's red light illuminates. A digital-signal processor in the mouse translates your movements into cursor motion on screen. Microsoft claims that optical tracking – in addition to avoiding the perils of dirt build-up on your roller – results in smoother cursor response.

#### Future style

The IntelliMouse sports a futuristic silver case designed to fit average-to-large-size palms. There are two main buttons flanked by a rubberized scroll wheel in the centre. Two auxiliary buttons on the left side are meant for thumb operation, although the larger one is a bit awkward to reach. The scroll wheel doubles as a fifth button. Microsoft's IntelliPoint control

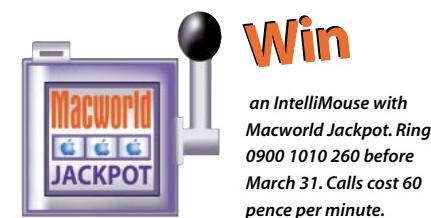
panel lets you change cursor sensitivity and customize operation of the buttons and wheel. Oddly, the mouse doesn't include the software; you have to download it from Microsoft's Web site, or request a CD from the company's Product Support group.

You can program buttons and button combinations to perform one of 15 different functions, including clicking, dragging, and typing simple keyboard shortcuts. The control panel also lets you adjust the wheel's scrolling speed from a single line to a full page at a time. If you like, you can even specify unique button and wheel settings for different applications.

#### Macworld's Buying Advice

At £49.95, the IntelliMouse is by no means the cheapest USB mouse on the market. But if you hate cleaning your mouse – and you want a device that looks like it belongs on the Starship Enterprise – the IntelliMouse is an excellent choice.

**Franklin Tessler**



Win

*an IntelliMouse with  
Macworld Jackpot. Ring  
0900 1010 260 before  
March 31. Calls cost 60  
pence per minute.*

New standard in Mac racing



## Star Wars Episode 1 Racer

Publisher: LucasArts Entertainment

[www.starwarsracer.com](http://www.starwarsracer.com)**Pros:** Fabulous Star Wars atmosphere; fast, smooth graphics; stunning gameplay.**Cons:** Multiplayer mode requires multiple CDs; needs a high-spec machine; no UK distribution.**Price:** \$39.95, plus \$16 shipping, plus UK taxes (£45 in total)**Star Rating:** /9.2

You've seen the film and the incredible Boonta Eve Classic podrace on Tatooine. Now relive it in the best possible way – at the wheel of a speed king's dream.

Graphic detail is very impressive from the off, and justifies LucasArts' minimum machine spec – a 233MHz iMac with hardware acceleration and OpenGL. Here is a game that has been created without compromise. The silky-smooth screen redraws are testimony to this –

**Boy racer**

*It's crunch time for Anakin Skywalker on Ando Prime, Racer's icy, rock-laden world.*

cut-scenes abound, lighting effects are spectacular and the lens flares convincing. Plus, you get to sit back and watch the original podrace film-footage. Even the kid-actor who plays Anakin Skywalker, Jake Lloyd, does the voice.

First up is free racing, with a selection of around a third of the available tracks. Keep an eye on the on-screen map and try to avoid the other 11 racers – damage from the non-stop bumping and barging can be mended partially, via the repair key, but the resulting speed-decrease drops you down a few positions.

Then it's on to the main event – the tournament where you race for real on 25 circuits, spread across eight different worlds. Snow, forest, underground, arena – every kind of track's on offer. The first 21

courses are divided into three groups – amateur, semi-pro and galactic. When you finish a group, one of four invitation circuits becomes available. Often, only a top-three or top-four finish will allow you to proceed to the next race.

There are some nice touches. Whenever you crash and reappear, there are always a couple of racers in front of you to pursue – great when you've just fallen off that rope bridge for the fifth time. Then there's the never-ending stream of taunts – hit the relevant key and fire back a set of your own as you blast past your latest victim. The further you get into the game, the better the selection of podracers – the money you earn from winning races gets spent at Watto's shop, or junkyard, with the owner giving a pretty good impression of *The Merchant of Venice*'s Shylock.

**Macworld's buying advice**

Racer also offers a multiplayer mode, supporting up to eight players on a local area network. Unfortunately, each person needs a CD in their drive – a bit greedy of LucasArts. Also, I found a nasty bug, where the use of the comma key zaps all keyboard shortcuts.

But this is hair-splitting. Racer is the best racing game ever seen on the Mac. You'll have to buy the game on-line from the States courtesy of LucasArts' attitude to the UK market – but it's worth every penny.

**Vic Lennard**

## Audio-sequencer



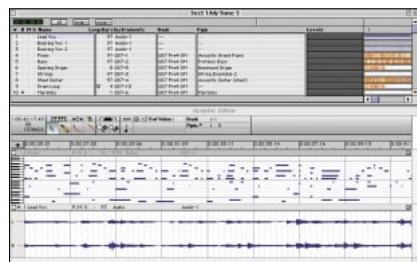
## Metro 5.0

Publisher: Cakewalk

[www.cakewalk.com](http://www.cakewalk.com)**Distributor:** Et Cetera (01706 228 039)**Pros:** ASIO and VST support; records up to 64-audio tracks.**Cons:** Sparse documentation; too many dialogue boxes.**Price:** £189 (including VAT)**Star Rating:** /7.9

What can you say about a company that discards the 500-page manual that graced a fairly complex MIDI application, and then "upgrades" it with 60 pages of PDF-format quick-start material and inadequate online help? While you may praise Cakewalk for its efforts to save trees, you can just as easily denounce it for making its mid-price MIDI sequencer, Metro 5.0, more difficult to use than is necessary.

The lack of documentation, and an interface that buries common commands in dialogue boxes, mars an OK MIDI sequencer. Metro's features compare well

**Making tracks**

*Metro 5.0 offers typical sequencer features such as track overview and graphic editing of MIDI data.*

with those of more expensive competitors – it records countless MIDI tracks and up to 64 tracks of digital audio. It supports ASIO (Steinberg's Audio Stream Input/Output)-compatible audio cards, as well as Adobe Premiere-compatible and Steinberg's VST-compatible effects plug-ins. Metro 5.0 also offers such common features as mix automation, groove quantize, audio scrubbing, and audio cross-fades.

Of course, you shouldn't expect miracles from a sequencer that costs hundreds of pounds less than the competition. Not surprisingly, once you begin to explore Metro's features you discover they lack depth. For example, Metro's effects plug-ins, such as reverb, delay, and chorus, are of questionable quality. The mixing console within the Instruments window doesn't let you assign a name to a fader, or switch effects on and off. Nor can you loop or

change the pitch of audio files, or easily view single tracks in the Notation window.

Even though Metro lacks some features, it can do much more than record MIDI and audio data. The program gives you some useful musical goodies – for example, you can record multiple takes without having to stop and start the sequence. Using Multiple Take Mode, you select an area of a sequence, determine how many takes you wish to record, and start recording. As you finish each pass, Metro returns to the beginning of the selected section and starts recording your next take in a new track. A unique Note Spray tool lets you add semi-random MIDI data to a track – for instance, notes constrained to a particular scale.

**Macworld's buying advice**

Metro 5.0 is a good sequencer for those on a budget, offering a competent – though occasionally shallow – set of features. Regrettably, some users may never discover these features due to the lack of proper documentation and an unintuitive interface.

**Christopher Breen****Win**

... One of five copies of Metro 5 with Macworld Jackpot. Ring 0900 1010 261 before March 31. Calls cost 60 pence per minute.

**Rehash of utilities classic**

## Action Utilities

**Publisher:** Power On Software[www.poweronsoftware.com](http://www.poweronsoftware.com)

**Pros:** Convenient navigation features; extensive drag-&-drop support; adds needed enhancements to Open-&-Save dialogue boxes.

**Cons:** Lost functionality with Navigation Services; no single installer, serial number, or manual; some redundancy.

**Price:** £62 (excluding VAT)**Star Rating:** ★★★★**8.6**

Mac veterans who remember Now Software's Now Utilities are likely to have bittersweet recollections of this set of system enhancements. Early adopters may retain fond memories of Super Boomerang – the tool that let you easily navigate through volumes and folders from within the Open and Save dialogue boxes – and Now Menus, a control panel that extended these navigation powers to the desktop.

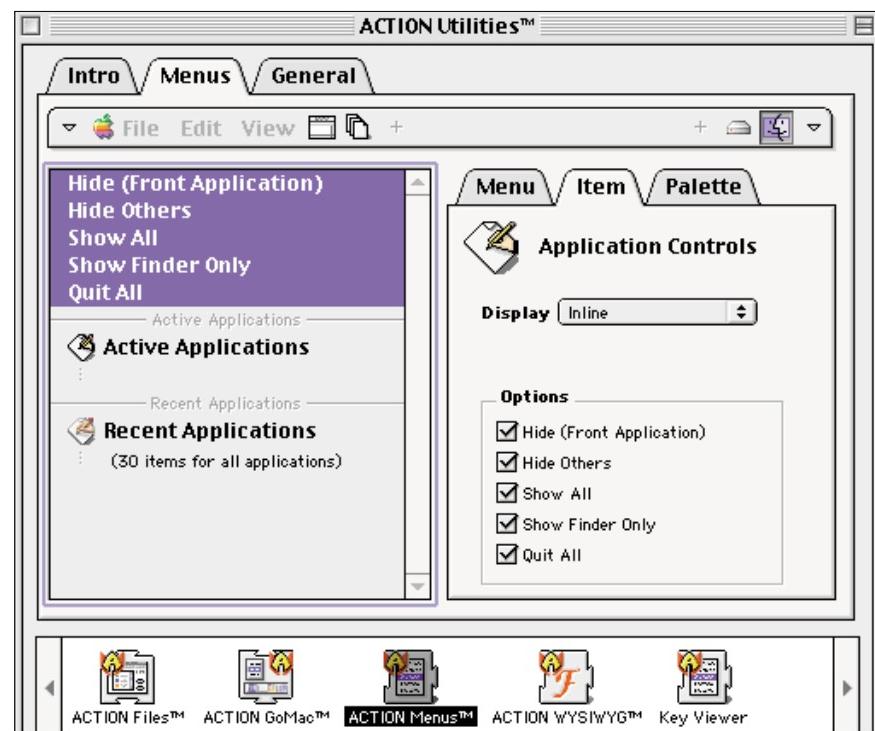
Alas, these same users were surely disenchanted when elements of Now Utilities ceased to function with newer versions of the Mac OS – or became so unstable that they were more hindrance than help.

Thankfully, Power On Software resurrected and enhanced the best parts of Now Utilities; made them compatible with the latest Mac OS updates; and released, in single form, Action Files, Action Menus, and Action WYSIWYG. Now Power On has bundled these three utilities with Action GoMac – a utility that places a Windows-like Start menu and Task Bar on your Mac's desktop – slapped a £62 price tag on the suite, and dubbed it Action Utilities. Considering its reasonable price, and the fact that at least three of the utilities are extremely useful, it's a compelling product.

The initial release of Action Utilities isn't quite an integrated whole – there's no single installer, serial number, or manual. You must install each utility separately, enter a discrete serial number for each one, and sift through four separate manuals. Power On said it will resolve these issues in an update that should be available by the time you read this.

Fortunately, the utilities aren't as dissociated once they're installed on your hard drive. You can control the settings for each utility from a single control panel. To modify a utility's settings, simply click on its icon, and then click on one of the settings tabs.

When we last reviewed Action Files, we mentioned that it added new functionality to the File menu's Open and Save As commands. It added hierarchical menus

**Worthy action**

*Power On Software has resurrected and enhanced the best parts of Now Utilities and made them compatible with the latest Mac OS.*

that listed favourite and recently accessed files and folders. It also made the Open-&-Save dialogue boxes resizable, and within those same dialogue boxes it added a Find command and provided Finder-like functions. For example, Action Files lets you create folders and aliases, rename and duplicate files, and view files by name, date, size, and type.

Power On has introduced a few changes since then. The utility now supports Apple's Navigation Services – the new Open and Save dialogue boxes introduced with Mac OS 8.5. Regrettably, the design of these new dialogue boxes is at odds with Action Files – if you invoke the Find command in a new Open or Save dialogue box, Sherlock appears rather than Action Files' own Find dialogue box – and the Open or Save dialogue box closes. Despite this annoyance, we're relieved that Power On made Action Files compatible with Navigation Services, and we believe Apple should fold Action Files' features into the next Mac OS.

**More good stuff**

Action GoMac 2.0.3 is almost unchanged from the version we reviewed last year. This utility mimics and improves on Windows' Start-menu, Task Bar, and Clock Tray features. It gives you quick access to recently accessed items, currently running programs, and your favourite applications. A powerful substitute for Apple's Launcher and Application menu, Action GoMac is well worth having.

Action Menus is the third useful component of Action Utilities. It lets you create custom menus for quick access to recently used applications, files, and

folders, currently running applications, and local and networked volumes.

Granted, Action GoMac makes some of this functionality redundant. But, Action Menus offers some other goodies. You can add items to the Apple menu by dragging them from the desktop, or an open window, into the Apple menu. And, you can easily assign custom key commands in applications – assign ⌘-T to the Empty Trash/Wastebasket command in the Finder, for example – by selecting a command with the mouse and pressing the desired key combination. Note, however, that the assignable Function Key option within Mac OS 9's Keyboard control panel takes precedence over Action Menus' key commands.

Action WYSIWYG replaces the font menu within each application with its own font menu. While viewing font names in multiple columns, in their true typefaces, and in family groups may be a godsend to graphic designers and desktop-publishers, users without a wealth of fonts may find Action WYSIWYG less useful than the suite's other three utilities. Although we like being able to view fonts in different colours and sizes, Action WYSIWYG is more of a bonus than a necessity.

**Macworld's buying advice**

For those who mourned the passing of Now Utilities, we're pleased to announce that an enhanced, stable, and affordable version of these venerable tools is now available in a single package. If you missed Now Utilities and wondered what all the fuss was about, perhaps it's time to leap into Action.

**Christopher Breen**

## Audio- and MIDI-editing software



### Pro Tools 5.0

**Publisher:** Digidesign

[www.digidesign.com](http://www.digidesign.com)

**Distributor:** Digidesign UK (01753 653 322)

**Pros:** The new MIDI features and other program enhancements give a much-needed boost.

**Cons:** Some buggy behaviour; examples of sloppy programming.

**Price:** £5,279 to £6,599 (including VAT)

**Star Rating:** ★★★★½/9.0

Digidesign's Pro Tools system has always included software and hardware components. The hardware consists of one or more audio-cards, along with one or more audio-interfaces. The software offers a multitrack waveform editor, a mixing console emulator. Also included are controls and commands to let you record and playback audio from a hard disk.

The system is so popular because Digidesign has encouraged software developers to offer Pro Tools options for recording and playback. So, plenty of musicians and composers use Pro Tools systems with the Midi and audio sequencer of their choice.

With version 5, Pro Tools has finally come of age as an integrated Audio- and MIDI-recording environment. It can handle most straight-ahead MIDI-programming

gigs – while the accent is still on the audio capabilities.

Firstly, I recorded a DX7 synthesizer using a MIDI track. When I pressed stop, the notes were immediately visible in the edit window for graphic editing. From here, notes can be made shorter or longer, and the Grabber tool used to move the pitch or position. It's even possible to draw notes in using the new Pencil tool.

The Selector tool, used with the MIDI Menu, can apply powerful region commands. These include comprehensive Quantize options, Change Velocity, and Change Duration – all of which are quite similar to MotU Performer's MIDI Region commands. Existing velocity, volume, pan, mute, and any continuous controller data can also be drawn in. The Pencil tool can be set to draw freehand, or to automatically draw straight lines, triangles, squares or randomly. SysEx data can even be recorded and played back – although it cannot be edited as in Performer and similar software.

What I missed – badly – is the list-editing mode found in MIDI sequencers, such as Performer. What I didn't miss from these sequencers is the music notation and advanced MIDI-processing features. These are much less important for straightforward MIDI recording. In fact, I found myself enjoying the simplicity of the more basic approach of PT5.

The transport bar now has both main and secondary positional displays. Within each you can show your choice of Bars/Beats, SMPTE Timecode, Feet/Frames, Mins/Secs or Samples. There is a Metronome on/off button with an associated Click and Count-off options dialogue box.

At the top of the tracks display, in the Edit window, the new Ruler View displays ruler tracks. This shows Bars/Beats, SMPTE Timecode, Feet/Frames, Mins/Secs or Samples. Ruler tracks are also available to display Tempo events, Meter events and Marker events – any combination of these can be turned on or off.

New scrolling options in the waveform edit window include a continuous scroll showing the playhead – a blue bar indicating where the playback point is in the edit window. With the playhead visible, the playback position stays where it is when you stop. The zoom tools have been improved with five-zoom-level buttons now available. And the Link Selections button links or unlinks the Edit window and Timeline selections.

#### Macworld's buying advice

I can recommend Pro Tools version 5.0 to anyone looking for a well-integrated professional-audio and MIDI software application. Entry-level users should consider buying the LE version with the cheaper Digi 001 hardware.

**Mike Collins**



#### Balancing act

Pro Tools 5.0 edits everything from notes to tempo, and allows editing in audio and MIDI.

## Super-quick colour printer



### Tektronix Phaser 850

**Manufacturer:** Xerox/Tektronix (0870 241 3245)

[www.tek.com/color\\_printers/](http://www.tek.com/color_printers/)

**Pros:** Fast, clean and simple to use.

**Cons:** Print-offs difficult to write on.

**Price:** Base model £2,406 (excluding VAT)

**Star Rating:** ★★★★½/8.8

Tektronix has updated its Phaser range with a faster A4 model, the Phaser 850. It improves on speed and is now the fastest A4-page printer in the world – achieving a blistering 14 colour-pages per minute.

Tektronix has done something no other company has been able to: give away free black ink. This makes it economical to use the colour printer for all office printing.



If you are familiar with the Phaser 840, the 850 holds no real surprises. It uses the same solid-ink technology – which enables faster colour than any laser-based colour printer. The secret is a quick first page to print. Laser printers must spend time warming a fuser wire before a page can be printed. The solid-ink technology uses a chamber that is always kept full of hot ink, as soon as you need to, it is ready to print.

The quality of image is unrivalled by any

printer in its class, the ink giving everything a glossy-magazine look. A thinner layer of ink is used than in previous models, making it easier to write on – although writing on a full-colour image is still next to impossible due to the waxy ink. In most offices this is not an issue – but it always raises the hackles of our production staff, who need to write corrections on glossy pages (*Too bloody right – ed.*).

The 850 comes with 10/100BaseT ethernet and USB right out of the box, so it will work with any Mac. It is stuffed with features – such as duplex and extensive print- and ink-management control, including remote management via TCP/IP.

#### Macworld's buying advice

This printer may cost more than a mono laser, but you always have to pay for extra features. The free black ink ensures that you don't have to buy a mono laser. There is no need to be worried about wasting money. The solid ink is much cleaner and simpler than laser, which can be messy and complicated to replace. The Phaser 850 is the perfect office printer for most situations.

**David Fanning**

Empire-building strategy game



## Civilization: Call to Power

Publisher: Activision/MacSoft

[www.wizardworks.com/macsoft](http://www.wizardworks.com/macsoft)

Distributor: GT Interactive (0181 222 9700)

**Pros:** Based on great Civilization II;

superb new graphics; new units and advances.

**Cons:** Gameplay "improvements" often annoy; bizarre combat results; no Leonardo's Workshop – argh!

**Price:** £39.99 (inc. VAT)

**Star Rating:** /6.8

**A**s befits a game with so grand a name, Civilization is billed by its makers as "the greatest strategy game series of all time". The empire-building simulation has sold over 2.5 million copies since its inception as Sid Meier's Civilization ten years ago, yet hasn't been properly updated since 1996's best-selling Civilization II.

The latest version, Civilization: Call to Power, follows the same epic course as the earlier games. You start out as a brave but puny settler – armed with a ragged sack of basic technologies – and slowly build yourself an empire of cities and awesome army of might.

Turn by turn, you explore your new world, building cities here and there, discovering and inventing things, managing your natural resources, organizing your people, and knocking seven bells out of neighbouring nations.

The first things you notice about Civilization: Call to Power (CTP) are the wonderfully modelled 3D unit icons and terrain squares. In the original Civilization, the Settler unit was a flat wagon on a coloured square; in Civ II, it became a static peasant with a spade; in CTP, we get a walking, talking young man – looking a lot like a gay gardener.

Settlers no longer build roads, irrigate or mine – this is now down to the size of your Public Works budget. While it makes things easier, it does take some fun out of the early stages of the game compared to Civ II. And, roads no longer affect production or trade, only movement points.

### Scottish-Australian axis

CTP offers you a trireme-full of new nations to choose to hail from: aside from the usual Romans, Greeks, English, etc, you can now be Scottish, Jamaican or Australian.

CTP is also full of new unit types – from Samurai to Storm Marine, there's now 65 in total. And civilization Advances are, well, more advanced – from Alchemy to Nano Assembly, there are 90 to complete. There are also some new Wonders of the



### Flawed masterpiece

*More beautiful than a medieval tapestry, Call to Power at least looks better than its illustrious predecessors.*

World for you to build: the Labyrinth, East India Company, and Dinosaur Park, to name a few. This is a great improvement on Civ II's limited options – but the lack of Civ II's Leonardo's Workshop wonder makes unit-production a bind.

In CTP, you can build underwater cities and orbiting space colonies. And, you can wage unconventional warfare, with economic attacks, propaganda, biological terrorism, and religious conversion. While adding realistic levels of complexity, I found these relentless non-combat attacks – the injunction-wielding Lawyer especially – detracted from the traditional blood-&-thunder fun of clashing armies.

CTP lets you witness your units clash with your enemy's, in a small animated combat sub-screen. Combat has been made more sophisticated by the pooling of units' attack and defence ratings. Sounds super, but even small groups of primitive units can now wipe out a Stealth Bomber – which is just silly when it happens more than once. This is equivalent to *Star Wars'* Ewoks winning time after time.

Instead of colonizing Alpha Centauri as your ultimate goal, in CTP you must breed alien life forms – although you can still win by knocking off every other nation.

CTP's gameplay "improvements" aren't always welcome. A line follows your cursor to show you the path your unit will take, but in practise, this just gets in the way – ruining your centred position on the map if you move your mouse. One slip of the mouse button, and the path can also issue false instructions to your unit – sending it marching off in totally the wrong direction.

### Macworld's buying advice

While I haven't spent anywhere near the game hours on CTP that I have over the years on Civ II, I'm still perturbed by many of CTP's gameplay "improvements". The lush graphics and wider range of units, advances and wonders are welcome, but some of the fun seems to have | been stripped out in favour of either sophistication – often too complex – or simplicity – often too automatic.

Civ II addicts should try it out for size, but don't delete the old classic. Newcomers should grab Civilization II while they can.

**Simon 'Tyrant' Jary**

## FireWire PC cards for PowerBooks



## CBFW2

Manufacturer: RATOC Systems

[www.rexpccard.co.jp](http://www.rexpccard.co.jp)

Distributor: CompuB (0800 018 6625)

Pros: Fast; comes with power connection.

Cons: Limited technical support.

Price: £189 (including VAT)

Star Rating: ★★★★/7.7

## FireWire 2 Go

Manufacturer: Newer Technology

[www.newertech.com](http://www.newertech.com)

Distributor: AM Micro (01392 426 473)

Pros: Good technical support.

Cons: Relatively slow; no power connection.

Price: £120 (including VAT)

Star Rating: ★★★★/7.5

**F**ireWire is the best hardware interface for Digital Video (DV) camcorders and other peripherals that require high-speed data connections. Until recently, however, FireWire devices were trapped on the desktop, due to the lack of FireWire ports in Apple's PowerBooks. Now, thanks to FireWire PC Cards, you can connect FireWire devices to any G3 PowerBook running at 300MHz or faster.

Macworld Lab looked at two FireWire CardBus cards: the FireWire 2 Go, from



Newer

Technology, and the CBFW2, from RATOC Systems. The RATOC card is faster and works with unpowered peripherals. Newer provides better technical support. Orange Micro and VST Technologies have also announced FireWire cards, but neither arrived in time for testing.

Both cards are a cinch to install – you run an installation program that copies the needed extensions to your System Folder, reboot the PowerBook, and plug the card into the PC Card slot. Along with the driver software, Newer provides QuickTime 4 Pro, which you'll need if you want to capture video directly from a DV camcorder.

When writing a 1GB QuickTime movie to a FireWire hard drive, the RATOC card was the speed champ, taking 3 minutes 23 seconds compared with 3 minutes 53 seconds for the Newer card. However, neither card could keep up with a FireWire-equipped blue-&-white Power Mac G3, which copied the file in 2 minutes 27 seconds. When the cards were reading from the drive, the difference narrowed, with each taking about 3.5 minutes.

The RATOC card also includes a connection for standard power adaptors, allowing the use of FireWire devices that rely on the host system for power. Desktop Macs can power FireWire devices through the cable, but you can't do this with a PowerBook – even one that's plugged in – because it would overheat the PC Card. RATOC gets around this limitation by placing the power-jack on the dongle used to connect FireWire devices to the card. The Newer card lacks a power connection.

Although the RATOC card is faster, and offers more features, the Newer card is backed by superior technical support. Newer offers extensive technical information on its Web site; RATOC's manual doesn't list any support contacts.

## Macworld's Buying Advice

RATOC's CBFW2 card gets the nod for its faster performance and standard power connection, which allows the use of unpowered FireWire devices. However, if you're a novice user who needs some hand-holding, you may find that Newer's superior technical support compensates for the FireWire 2 Go card's limitations.

Kevin Mitchell



## Win

... One CBFW2 or one of two FireWire 2 Go with Macworld Jackpot Ring  
900 1010 262 before March 31. Calls cost 60 pence per minute.

## Home picture-editing



## Corel Custom Photo

Publisher: Corel

[www.corel.com](http://www.corel.com)

Distributor: Corel (0800 581 028)

Pros: Offers passable layout capability.

Cons: Unintuitive; rubbish at object cut-outs.

Price: £43.99 (including VAT)

Star Rating: ★★★★/6.1

**I**mage-editing software is all the rage. Apple has even got in on the act, bundling its latest iMacs with the capable Adobe PhotoDeluxe. The message is clear – punters are buying digital cameras and scanners in droves, and love playing around with snaps of loved ones – it brings out both the child and artist in us all.

Leaping onto this pixel-mixing bandwagon is Corel, weighing in with Custom Photo. It's comprised of two apps: Photo House 5 and Project Designer.

Photo House is for photo-editing and painting, and is particularly good for retouching old photos and removing red eye. Project Designer is a graphics-based app. It offers text and layout features for the creation of cards, newsletters and stationary. It comes with 1,000 sample layouts that cover most eventualities.

Both bits of software draw on Custom Photo's stock of 10,000 images. Sounds great, doesn't it? The only thing is, 4,000 of these are tacky clip-art images that only the worst free newspapers would dream of using. Of the rest, there's the usual line-up of wild animals in their natural habitats. For a collection of animals in an unnatural habitat, take a look at the screenshot (left).

One serious drawback with Custom Photo is its poor image cut-out abilities. Slicing up pals and placing them in weird backgrounds is image-editing basics. Yet there's no tool capable of accurate cut-outs – just a lasso that can only be used freehand and at low magnification. This results in cut-outs that are unacceptably crude, even for light-hearted use.

Custom Photo is also unintuitive to use. On-screen hints for use of its tools assume intimacy with the manual. Similarly, the manual assumes familiarity with the



## P-P-P-Pick up a Penguin

Custom Photo's stock cut-outs can give hours of fun.

interface – the result being a frustrating non-connection between the two.

## Macworld buying advice

If you have a scanner, this product will offer little that your bundled software doesn't already give you.

That leaves owners of a digital camera and a Mac lacking any image-editing software. Custom Photo has some decent things to offer – not least an impressive range of templates for cards, calendars and invitations, and for the price it's not a bad buy. But, in trying to cover so much ground, it has spread itself too thin.

Sean Ashcroft

## Powerful-Web plug-ins for Adobe Acrobat



## Adobe Acrobat 4.05

Publisher: Adobe (0818 6064001)

[www.adobe.com](http://www.adobe.com)

**P**ros: The free plug-ins add the missing features of the earlier upgrade to Acrobat; ability to download Web sites to browse when offline.

Cons: Large sites take a long time to download completely.

Price: Free download.

Star Rating: ★★★★/7.3

**M**acworld exclusively reported in News, and Reviews, August 99 that Adobe Acrobat 4.0 for the Mac did not have the same features as the PC version.

However, Adobe announced in November the free plug-ins for Macintosh users which fill that gap. Namely, the Web Capture feature, digital-signature support, Web Buy and the ability to send emails directly from the page.

E-commerce has thrown up many issues regarding security and methods of identification. The Web Buy plug-in allows you to download encrypted files in PDF Merchant – a server-based technology, that can be used alongside e-commerce products for secure transactions and encrypted PDF files. This allows your computer to be individually identified, in a similar way cookie string.



## A long wait

It took longer than expected to download pages using Acrobat's new features.

## Digital Signatures

Whether you want to authenticate a purchase online or are "signing off" important documents, being able to add your own digital signature is becoming more important. Adobe's SelfSign allows users to create personal valid authority, meaning there's no need for a CA (Certificate of Authority).

The biggest new feature is the Web Capture utility. It lets you connect to a specified URL, and download and convert images, text, frames and links from a Web site. You then view the site in PDF format.

Downloading, recording and restoring the links took some time – although Acrobat warned me that it would. You can set conversion preferences before downloading – such as size and file type. However, it still took about half an hour to collect 50 pages.

Database-generated information can be gathered easily. You can fill out Web forms in the downloaded PDF version and post your query without having to launch mail client software.

It would, however, be useful to show the time taken to download a site as well as the number of bytes collected. Also, you can specify what level of download to make, but not what to miss out. Some form fields were re-sized and I couldn't find any way to stop this happening.

## Macworld's Buying Advice

As the plug-ins are free from the Adobe Web site, I recommend that you get them. Even if just for the extra Web security and the phone-call saving capture ability. Once you've downloaded the Web Buy plug-in, you can download selections from popular books for free.

Gillian Robertson

## Guitar-teaching software



### Guitar Method 1.2

Publisher: eMedia

[www.emedia.org](http://www.emedia.org)

Distributor: (0181 970 1909)

**Pros:** Easy to use; provides everything you need to learn guitar.

**Cons:** Such an innovative guitar course should teach some modern songs; seems built for 17-inch plus monitors.

**Price:** £49.95 (including VAT)

**Star Rating:** /8.8

**G**uitar Method 1.2 is a structured course aimed at beginners. The novice guitarist goes through the essentials of strumming, tuning and time signatures, all the way to bass note strums and finger-picking styles.

The appendix dealing with musical notation is also very useful. You get 60 lessons, a hundred songs, and a running start in playing the guitar.

The beauty of the program is the way it teaches. Multimedia is used throughout – 60 different videos show the guitar tutor

(Kevin Garry) playing the songs, and talking you through the basics. A further three hours of audio files gives you more information and tuition.

The animated fretboard shows you the finger positions and chord names – as the tune plays, helping you get to grips with their relationships with rhythm.

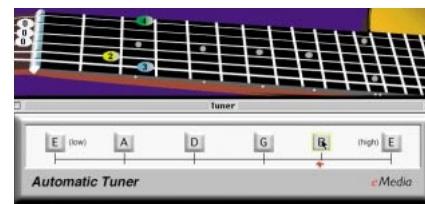
The software's use of SimpleSound lets you play your versions of chords or songs into a computer, and then play the sounds back, giving you a fair idea of how you are progressing. It teaches 12-bar blues, music notation and rhythm patterns. Sadly, like most guitar methods I've encountered, the songs tend to fall into the old-time folk, blues and traditional categories.

#### Lessons on tap

Essentially, this is a great way to learn guitar. You get one-on-one instruction when you want it, the tutor never loses patience, and I can't think of a better package to open the doors to rock 'n' roll heaven for budding guitarists.

Guitar Method 1.2 does what it says it does – teaches you basic guitar in an unpressurized way. You learn at your own pace, and occasional end-of-topic quizzes help you retain the information and assess your own success.

eMedia has a couple of other products out, including a CD full of more varied songs and a more advanced CD, Guitar



#### Guitar for dummies

*Guitar Method 1.2 is perfect for novice musicians.*

Method 2. CD 2 teaches you hammer-ons, pull-offs, bends, vibrato, slides and barre chords – but the whole course is geared toward learning at your own pace.

A couple of minor quibbles. The windows are pretty basic, without even the virtual chrome of Mac OS 9. Another negative is the impression I get that the software is built to run on 17-inch-plus sized monitors. Sometimes when using the animated fretboard, the top part of the page disappeared.

#### Macworld's buying advice

Guitar Method 1.2 is an invaluable piece of software. It teaches you how to play the guitar in a far more accessible way than book-based guitar courses. It'll still prove useful once you've finished the course for the chord dictionary alone. To play guitar, start here – as far as I know this is the only Mac-compatible guitar-tutoring course.

**Jonny Evans**

## Web-broadcasting software



### Sorenson Broadcaster

Publisher: Sorenson Vision

[www.s-vision.com](http://www.s-vision.com)

Distributor: Trimedia Broadcast (0207 734 8404)

**Pros:** Straightforward interface; supports multicasting.

**Cons:** Some minor bugs; poor documentation.

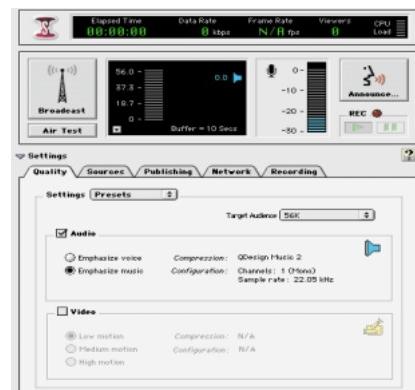
**Price:** £149 (excluding VAT)

**Star Rating:** /6.9

**A**pple's QuickTime 4.0 is the first QuickTime version to permit streaming of live content, such as radio or television feeds, convention speeches, and conferences. But, while QuickTime Streaming Server can dish out live streams, it can't encode them. In broadcasting terms, QuickTime Streaming Server is merely a transmitter; it needs an incoming signal to beam out.

And that's where Sorenson Broadcaster 1.0 beams in – it lets you compress live audio and video signals into QuickTime streams.

Regardless of your Mac's configuration, you don't need additional hardware to encode audio-only content – just plug



#### Live feed

*Sorenson Broadcaster lets you stream live video over the Web.*

your audio source into your Mac's input jack. To encode video, you need a Broadcaster-compatible capture card – a list of them is available on Sorenson's Web site.

Choosing compression settings appropriate to your content, and to your audience's connection speeds, is key. Broadcaster's presets make this job a breeze, and a Customize button lets you tweak settings. After choosing compression settings, you specify the name of the broadcast as well as copyright information. Then you enter the Internet Protocol (IP) address of the QuickTime Streaming Server you'll be using.

If your audience is connected to a local-area network, rather than the Internet,

Sorenson Broadcaster offers a multicast mode. Multicasting uses network bandwidth efficiently by letting all users on your network "tune in" to one stream. And multicasting doesn't require QuickTime Streaming Server – all you need is Sorenson Broadcaster.

Sorenson Broadcaster can also archive a live stream to disk. This lets you save a live event for subsequent on-demand delivery using QuickTime Streaming Server. You can also archive live content without actually streaming it.

Before you can begin streaming, you have to announce the broadcast. This involves exporting, via Sorenson Broadcaster, a QuickTime movie containing URL and compression information, that your audience's QuickTime Players use to connect to the live stream.

If you're streaming over the Internet, you need to create a reference movie, stored on QuickTime Streaming Server, that points to the live stream. It's a simple process – or at least it would be if it were accurately documented. Sorenson Broadcaster's documentation is light on details, and often downright wrong.

#### Macworld's buying advice

Sorenson Broadcaster has a few minor flaws. But, by and large, version 1.0 is a fine effort. If you're doing QuickTime streaming, it's the only encoding tool you need.

**Jim Heid**

## 3D design for beginners

**MetaCreations Carrara****Manufacturer:** MetaCreations[www.metacreations.com](http://www.metacreations.com)**Distributor:** Computers Unlimited

(0181 358 5857)

**Pros:** Easy to learn; fast rendering; fun physics.**Cons:** Runs out of steam with complex scenes.**Price:** £299 (excluding VAT)**Star Rating:** ★★★★/8.7

The world of 3D design is a closed book to many 2D designers. The prospect of making the shift to 3D can be daunting. Enter Carrara, the new 3D modelling/rendering/animation program with high-end features, but simple enough for a novice.

The team that produced the fabulous Carrara-d, has combined with the Ray Dream Studio team, to develop Carrara. Both these applications can be seen in Carrara, though the interface will be more familiar to users of KPT Goo and other Kai-inspired apps.

Even though the interface is funky, it isn't so weird that you can't figure how to use it. It's both intuitive and complex, and there's a huge tutorial and reference guide as back-up.

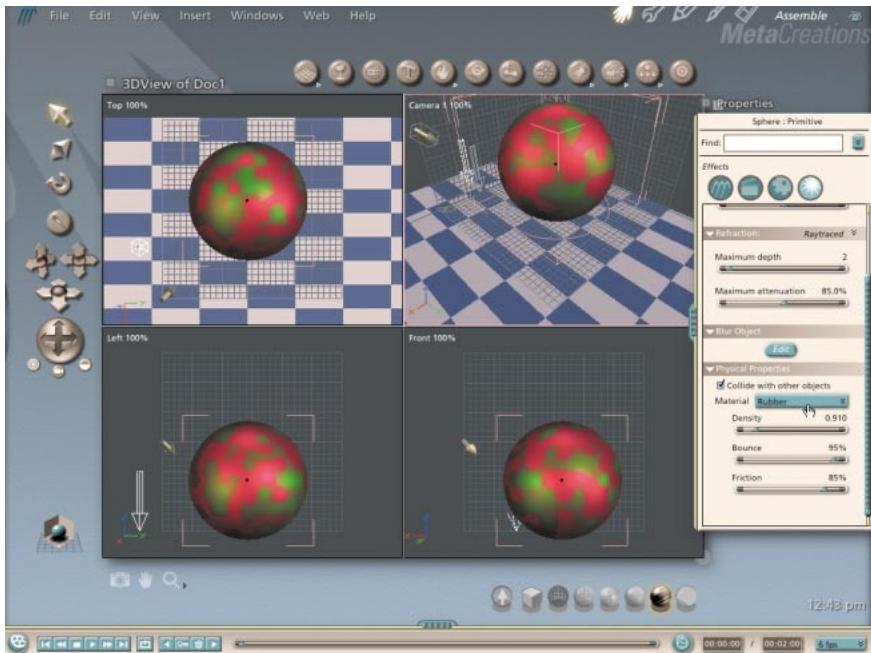
The creation process is divided into five sections, or rooms as MetaCreations calls them. First is the Assemble room, where you bring the elements of your scene together. Next is the Model room, where objects are created within the scene. The third room is called Storyboard, offering a quick-and-easy way to sketch out your animation. The forth is the Textures room, for adding colour and patterns to objects. Finally, there is the Render room, for setting the parameters for final output.

There are a number of features that you simply don't expect to see in a graphics program like this.

Realistic physics, for example, has historically been a high-end and expensive feature, but it is available in Carrara. It's extremely simple to use, though it's easy to

**Rough terrain**

Carrara's Terrain Editor is almost identical to Bryce's.

**More bounce to the ounce**

Once you've set the material of which an object is made – in this case rubber – you can experiment with the levels of bounce and friction, as well as density.

get carried away making complex models that bring the physics engine to a halt. Two or three elements in a scene with gravity is fine, but more than that and you'll wait longer than the laws of physics allow. Eventually, the application gives up – but not without a polite warning of impending doom – and a chance to save.

You can assign three physical properties to any object: Density, Bounce and Friction. These determine how the object will react when it is in contact with any other object. There are a few pre-set material properties available – including rubber, wood, clay and ice. Each one can be tweaked to get the desired effect.

The physics modeller is good, but flawed. Occasionally, I had a problem with objects falling through the floor. Also, it's easy to make objects that can cause problems. I created a basic animation with a bowling ball and skittles, but wasn't accurate enough when making the skittles, and they had slightly rounded bottoms. The result was an animation where the skittles fell over before the ball hit them.

The Assemble room is clear and easy to navigate. In each of the rooms there is access to tool palettes from drawers at the side of the screen. These can contain anything from pre-designed objects to textures and other shaders. On the right-hand side, the drawer contains information and properties for each object, and the bottom drawer is devoted to animation settings. There are dozens of shaders available, and adding to them is simple. If you use your own bump-maps or custom textures, you're given the opportunity to save them with each document.

The Modelling room is more difficult to use. Creating new objects can be a little confusing for the beginner – go through the

tutorial for this room to make sure the concept is well understood.

The final stage of rendering is faster than any I've seen. This is down to the Hybrid Renderer, which uses the latest advances to determine which parts of the image require ray-tracing and which need the simpler and faster Phong shading. In the past, if you had a single reflective surface in a scene you would have to raytrace the whole thing – even though not all surfaces require ray-tracing.

**Macworld's buying advice**

Carrara isn't designed to be the next Cinema 4D or Maya – it's much simpler than either. If you are a 2D designer, it would normally require a big investment of time to learn a 3D program. But with Carrara, you can get the majority of the features figured out in a weekend. With a little swotting, you can be an expert within a week.

MetaCreations has targeted this package at Web designers and traditional 2D designers. It's capable of outputting MetaStream files for Web use, so it fits into MetaCreations new "Internet visualizations solutions" strategy. Hopefully, this will ensure it remains a product past version 1.0, unlike some other MetaCreations software. Carrara is fun, and represents a great opportunity for artists to go 3D.

**David Fanning****Win**

... One of three copies of Carrara with Macworld Jackpot. Ring 0900 1010 263 before March 31. Calls cost 60 pence per minute.

# Macworld preview

## Illustrator rival

### FreeHand 9.0

Publisher: Macromedia

[www.macromedia.com](http://www.macromedia.com)

**Pros:** Lots (and lots) of interesting new features.  
**Cons:** Poor value for money as a whole-number upgrade; rough edges to some new features.  
**Price:** FreeHand 9.0, £279; upgrade from FreeHand 8, £99 (all excluding VAT)

The sheer quantity of new features in FreeHand 9.0 makes it look like a worthwhile and interesting upgrade. But, on closer inspection, the package lacks cohesion – ultimately, it's more of an 8.5 than a 9.0. The rawness of some of the new features only underlines this. It's tempting to draw the conclusion that the looming arrival of Illustrator 9.0 (and the kudos of being in a position to release FreeHand X to coincide with Mac OS X) has forced Macromedia's hand. It may have been wiser to be second to market, with a more tightly-focused version, rather than release this collection of disparate tweaks – that represent only moderate value for money.

#### Fascinating feature

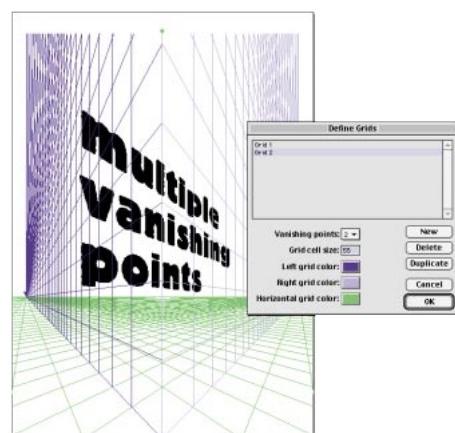
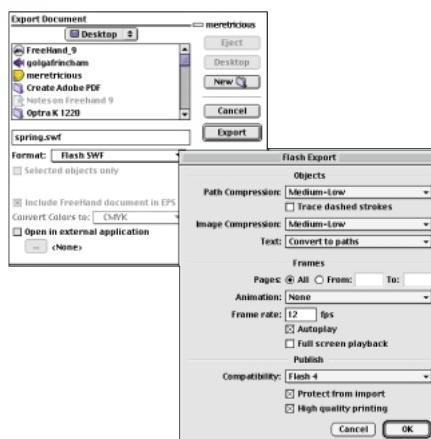
Grumble done. It also has to be said that, although the new features are all over the place, most of them are useful and interesting. And, there's plenty of them. If quantity, not quality, made an upgrade, FreeHand 9.0 would get a Star Rating in the high nines.

Sexiest of all, is the extended Flash synchronicity – mainly the SWF Export feature, which allows any document created in FreeHand 9 to be exported as a Flash file – either static or animated – with options for autoplay and import protection.

The ability to export static Flash files is particularly useful. Because vector-based format – .swf files – are resolution- and PostScript-independent, a document can be output on any printer and still maintain its integrity. The new Release to Layers feature supports the SWF Export facility – selecting a group of objects (or a text block) and applying Release to Layers separates each object, or letter, to individual layers ready for export to Flash.

More underwhelming is the new HTML Export feature, which is currently of limited functionality, and, therefore, limited use. In my tests, it simply dumped the whole image as a single file into an HTML file containing the appropriate embedding tags. There is no dialogue box for a Save location – output appears on the desktop – and although a listing window warns of translation problems, it doesn't fix the more straightforward ones – or offer suggestions for fixing the rest.

The Symbols Library is another useful feature, although its unintuitive interface suggests it could have done with another



#### A matter of perspective

Flash Export (above, left) is the sexiest of the new features in FreeHand 9. The New Perspective Grids feature has a slightly unfinished feel (above, right).

month on the drawing board. The Library carries graphics that are frequently used in the document, and each occurrence within the document is linked to the graphic in the Library. Updating a particular graphic becomes a matter of a few keystrokes, even if you've used it thousands of times.

But if you're used to Flash, where clicking on the symbol's icon in the Symbols palette makes the item appear ready for editing, you'll be confused by FreeHand 9's equivalent. A symbol first has to be found in the document, released using the Modify menu, selected and edited, and then dragged back to the Symbols palette to replace the original.

#### Keeping it in perspective

Also interesting is a new Perspective Grids feature, that should gladden the hearts of cheesy corporate-sting animators. Set horizon lines and up to three vanishing points, and any vector object attached to the resulting perspective grid scales and changes perspective as it's positioned on the grid. Grids can be changed while objects are attached for immediate updating.

Again, there's a slightly unfinished feel to this feature. For instance, clicking on the Perspective tool doesn't automatically display the perspective grid. And, locking items to the grid is a real faff of keystrokes – click, keep mouse down, tap an arrow key. Macromedia has its work cut out if it's to tidy up this upgrade from the beta version we're previewing here.

The new Enveloping feature is a plug-in brought in from the cold, and very clever too. It warps and distorts objects directly on the page. There are pre-set envelopes, or users can create their own using FreeHand 9's paths.

There's also a new Magic Wand tool, à la Photoshop. Just click to select continuous areas of colour, in either bitmaps or vector objects, and convert the selection into a

new path. Finally, there's a handful of improvements to existing tools. For instance, object transform handles now have integrated skewing and resizing built in. The Freehand tool has a precision control to smooth or jag paths. And, the Blend tool now has the ability to blend composite paths and groups.

To add to all this, there's a heap of other incremental improvements to FreeHand 9's tools and features. These include a new Page tool showing document layout and allowing deletion, addition, duplication, re-orientation and resizing of a page or pages. Also, it's easier to manage linked external files. And, new selection commands including invert, subselect, select all items on a layer, select on contact, nudge increments and extended locking facilities.

FreeHand 9 has added new measurement units – including the bizarre 'nautical miles'. It can now, at last, recognize clipping paths on imported EPS files. Step-&-repeat facilities have been added, and it has a "sharper knife" – up to 32,000 cut-points on a path.

Other improvements include a new Lasso tool, a Paste Special – which allows the paste format to be specified – PDF import/export, and enhancements to the GIF Export facility (four dithering levels, optimize colours, and an adaptive Websnap).

Also, there's now Relative Grid – a trip down Memory Lane to FreeHand 3.1 – with FreeHand 9.0 remembering the placement of an object in relation to a grid.

#### Macworld's buying advice

There's plenty of stuff here, but nothing that puts Freehand 9.0 in the "must have" category. It remains up for debate whether Freehand 9.0 should really have been Freehand 8.5, with a smaller price tag.

**Karen Charlesworth**

Coming soon: Mac OS X

# refreshing Aqua Macintosh

Apple has finally revealed the luscious interface to its thoroughly modern, next-generation operating system. **Simon Jary** thinks it's a cool, class act.

Many years ago (back in 1988, to be precise), Apple realized that its core asset – the elegant Macintosh computer operating system – was slipping behind in the technology stakes. The Mac OS has never been beaten for design grace and intuitive features, but Microsoft's Windows NT and the various flavours of Unix were way ahead in many areas of functionality and system stability.

In 1991, Apple responded to Windows 3.0 with the mainly cosmetic changes of the Mac's System 7. But, behind System 7, Apple engineers were busy working on its planned successor – the future-friendly operating system, code-named Copland.

Copland wasn't alone. Apple also worked on a couple of object-oriented operating systems, code-named Pink and Red (System 7 was Blue). Neither made it out of the labs. So, it was up to Copland to move Apple on to the next plane of computing technology.

Sadly, and very nearly tragically for Apple, Copland was a lamer duck than a one-legged Mallard – with an arthritic knee. It was meant to be completed in 1993, in time for Windows 95 – "the biggest single competitive threat in Apple's history", according to Michael Malone's *Infinite Loop – a study of Apple Computer*. But, when Microsoft shipped the aptly named Win 95, Apple still had no response – and had spent hundreds of millions of dollars on Copland's development. Despite the massive spending, Apple seemed more interested in its Newton handheld computer than its crown jewels – the Mac OS.

To catch up, the Mac OS needed to be two things. It had to be super speedy, and it had to be more "modern" – meaning it required several impossibly complicated sounding features:

pre-emptive multitasking, multi-threading and protected memory. In May 1996, Apple's then-CEO, Gil Amelio, announced that Copland would never ship as a complete product, but would instead be chopped up – with the best available pieces becoming part of the upcoming System 7.6. Other bits appeared in Mac OS 8, released in 1997. But none of those all-important modern features made the cut.

Without Copland, Apple was staring defeat in the face – soon Microsoft would really have no competition in the desktop PC front, and only disparate flavours of Unix to beat in the workstation and server markets. Amelio looked to buy former Apple chief technologist Jean-Louis Gassé's BeOS as its next-generation operating system. But, in the end, Apple plumped for the advanced – but little-used – NeXTStep operating system. For \$425 million, Apple not only gained the foundation of its next major OS, but eventually found a new CEO – none other than its whizzkid original co-founder, Steve Jobs.

For Apple's purposes the Unix-based NeXTStep became known as Rhapsody. This would run current Mac programs under something called the 'Blue Box' and modern, native applications in its 'Yellow Box'. Again, Rhapsody looked like it was the answer to Apple's OS problems, but it was a complex plan to make it as intuitive as Macintosh users were sure to demand.

Rhapsody changed names to Mac OS X (pronounced 'ten'), and a ship date was scheduled for this spring (see *Macworld*, July 1999).

At January's Macworld Expo 2000 in San Francisco, Steve Jobs – now returned as permanent CEO – announced that Mac OS X would be released this summer (after public betas in the spring). Apart from the slight delay, Jobs' announcement held two particularly important show stoppers. First, OS X would be installed on all Macs by January

2001 – meaning that this next-generation system would not just be for high-end professional users as was at first expected, but was also intended for consumer machines, such as the iMac. Second, Jobs showed us exactly what OS X will look like. And, it looks superb – almost worth the 11-year wait.

Because Mac OS X is for iMacs as much as it is for G4 Power Macs, Apple could not abandon its traditional twin pillars of OS design: attractive appearance and pleasure of use. Apple claims that "the same design sensibility that gave the world the iMac, iBook, Power Mac G4 and PowerBook inspires the Mac OS X interface".

#### Aqua-tonic: Liquid looker

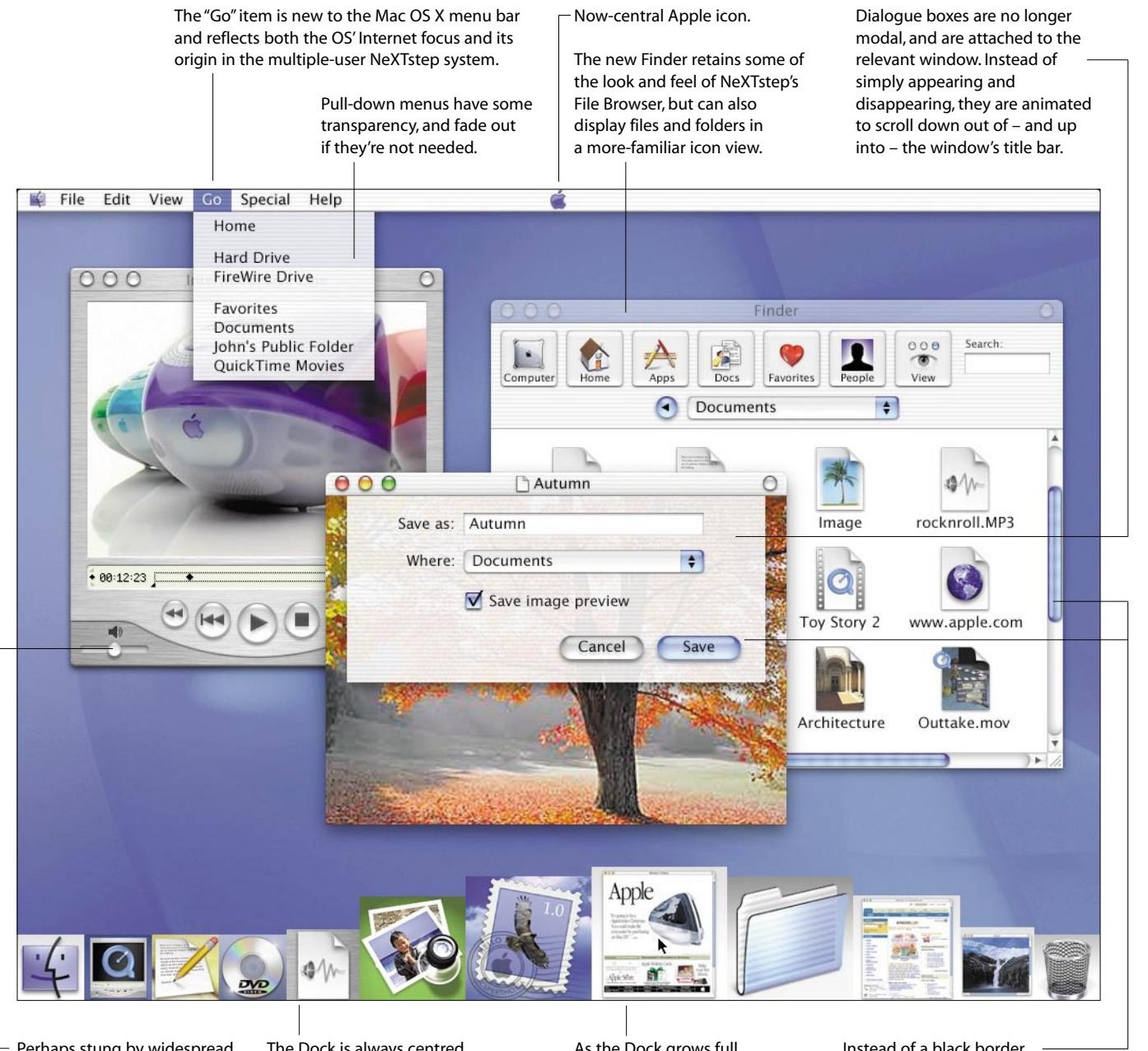
And the new Mac interface we're all going to have to move to one day soon is called 'Aqua' – because of its cool-watery appearance. It's a kind of electric sky blue. According to Apple, "the characteristics of water infuse the lucid feel of Mac OS X. Aqua brings your computer to life with colour, depth, translucence and motion".

While Mac OS X does allow a fair amount of user customization, Apple will not be offering Appearance Themes as in Mac OS 8.5/9. The director of OS technologies in Apple's worldwide product marketing department, Ken Bereskin, told me that Aqua will always be sky-blue – but public pressure may force Apple into offering the new interface elements in all its fruity and Graphite colours.

Apple has two principal goals for Aqua: to create a modern operating system that's easy to use; and "to make it look more appealing than any Mac you've ever seen". By definition, that means Mac OS X has to be more intuitive and better looking than anything

continues page 70





Perhaps stung by widespread criticism, Apple revised the QuickTime Player's sound control from a thumbwheel to a good, old-fashioned slider.

else before it. Some task, but the people who revolutionized the PC market with some neat technology and coloured plastics really do seem to be on course to deliver this time.

#### Interface makeover

In my 'Read Me First' opinion column (*Macworld*, February 2000), I recalled a conversation I had with graphics guru Kai Krause a couple of years ago – in which he revealed that he was once asked by Apple to help redesign the Mac's ageing interface. And there's a distinct Kai flavour to Aqua's 32-bit 128x128-pixel, photo-quality icons – closely resembling the luscious icons seen in MetaCreations applications such as Soap and Bryce.

Dialogue boxes' default buttons – commands that respond to the return-key, and save on mouse miles – are no longer merely double-bordered. In Aqua, default buttons pulse with a calm sky-blue heartbeat – see the Save button of the central window in the screenshot above. This gentle throbbing is a nice effect, but could

The "Go" item is new to the Mac OS X menu bar and reflects both the OS' Internet focus and its origin in the multiple-user NeXTstep system.

Pull-down menus have some transparency, and fade out if they're not needed.

Now-central Apple icon. The new Finder retains some of the look and feel of NeXTstep's File Browser, but can also display files and folders in a more-familiar icon view.

Dialogue boxes are no longer modal, and are attached to the relevant window. Instead of simply appearing and disappearing, they are animated to scroll down out of – and up into – the window's title bar.

like the new Finder, Mail, and the system-preferences panel will all be confined to a single window. Apple's approach is clean and simple.

Apple has taken the single-window concept one step further and applied it to the whole operating system. While today's Mac OS can run many applications simultaneously (depending on the amount of installed and virtual memory), you can interact with only one at a time. Even with the tear-off Applications palette (from Mac OS 8.5

onwards), with many applications it's all-too easy to waste time arranging windows, or switching between applications.

Mac OS X actively helps you organize your screen space with a new feature called Single Window Mode – click the purple button on the right-hand side of each window. When you're in Single Window Mode, the Mac makes the current window the active window and automatically hides all the other open windows. When you want to work on another document or application, the currently active document is automatically removed – and the new document becomes the only active document on the screen. Again, this is a clean and simple solution for a growing problem that threatened the whole desktop-file-folder thing.

#### Dock culture shock

As befits a new OS interface, Apple has been thinking different about many of the working ways we've got used to – particularly, the Mac's desktop metaphor and means of navigation. The company claims to have stuck to a simple guiding principle: "a place for everything and everything in its place". On top of all its hard work in reducing screen clutter with the Single Window Mode, Apple has ditched the Control Strip for something called "the Dock".

At Macworld Expo, the Dock demo was the most wildly applauded. In essence, the Dock is Apple playing catch-up with Microsoft – which introduced a very similar feature in Windows 98, called the Active Desktop Taskbar. As David Pogue recently pointed out in his 'Desktop Critic' column (*Macworld*, September 1999), Apple has been 'borrowing' Windows elements since Mac OS 8 – it sure makes a change after years of Mac imitations in Windows.

*continues page 72*



## Darwin: evolution of the Mac species

**A**cording to Apple, the Darwin core-OS layer is "the cornerstone of the rock-solid foundation" under the new Aqua interface. All that modern stuff – pre-emptive multitasking, multi-threading and protected memory – that is supposed to offer us amazing new levels of stability, reliability and speed is possible because of Darwin.

Remember I said that Mac OS X's architecture is radically different from what we've experienced previously? This is because Darwin is related to the powerful Unix operating systems of the über-computer servers and workstations that run the Internet and do all the special effects for Hollywood.

Mac OS X ignites the performance potential of the PowerPC processor, via the sophistication of its kernel. A kernel is the key component in the OS that handles most of the interaction between the OS and the hardware. Mac OS X relies on the Mach 3.0 kernel – originally developed at Carnegie-Mellon University by Avadis Tevanian, Apple's senior vice president of software engineering. Tevanian came to Apple with Steve Jobs as a part of the NeXT deal.

Darwin also uses Apache – the Web server that runs over half the Web sites on the Internet – and, according to Apple, "makes it friendly enough to use on your desktop for personal file sharing".

Darwin incorporates the BSD networking stack – the basis of most TCP/IP implementations on the Net today – extended to support the next-generation Internet Protocol IPv6. There is also built-in support for PPP and IPsec, allowing users to securely access remote networks. Full support for AppleTalk should ensure smooth interoperability with existing Mac networks.

#### Major benefits

**Crash-resistant computing** Protected memory walls off applications from each other. Each running application is allocated a unique address space. Isolated in their own memory space, protected programs can't interfere with each other if one comes a cropper. So, if your Adobe InDesign or QuarkXPress crashes, you won't need to restart your Mac. Darwin simply shuts down the offending program and its memory space, without interfering with other running apps.

Apple showcased its own explosive BombApp that crashed itself, but left a QuickTime movie playing uninterrupted in the background.

And, when an application needs memory, the new virtual memory manager automatically allocates precisely the amount of memory needed by the application. This should mean the end to "Out-of-memory" messages – unless you fill up your hard disk.

**Faster data throughput** Darwin includes a high-performance plug-&-play I/O subsystem for quickly moving large chunks of data from peripherals – such as storage devices, printers, and DV cameras. Multiple applications can access multiple devices simultaneously with minimal interference, for faster, priority-driven data throughput.

**Managing tasks** Pre-emptive multitasking makes your Mac a lot smarter handling its G3 or G4 processor. Mac OS X prioritizes tasks – ensuring activity levels are at maximum, and making sure that every task gets the resources it needs. When something more important comes along, the controller prioritizes it over other tasks in the queue. This means your Mac can handle several different tasks at once, giving priority to your primary application, but still crunching away at other jobs in the background.

Darwin is open-source, meaning that Apple has made a lot of the code public, and encourages third-party developers to offer suggestions on future versions – this is similar to work being carried out on the increasingly popular Linux OS, and in direct contrast to Microsoft's proprietary Windows systems.

As Darwin is the core OS for Mac OS X, we can look forward to important developer contributions to Darwin making their way into future versions of Mac OS X. This should result in a tighter, more compatible operating system that works with, rather than beneath, key applications and technologies.



## Mac OS X: Killer graphics



To maintain and extend its lead in its traditional markets, Apple promises "killer graphics" from Mac OS X. This advance should benefit both professional artists and consumer gamers, fitting well with Apple's single-OS strategy for all Macs post-January 2001.

For these killer graphics, Apple combines three powerful graphics technologies: Quartz, QuickTime and OpenGL. The company claims this combination will "take the Mac's graphics capabilities beyond anything you've ever seen on a desktop operating system".

Based on Adobe's Internet-standard portable document format (PDF), Mac OS X's new 2D graphics system, **Quartz**, delivers on-the-fly rendering, anti-aliasing and compositing of PostScript graphics with "pristine" quality. According to Apple, graphic elements that were sharp before will now be "dramatically sharper" – even when you greatly increase their size.

PDF is a universal file format that preserves all of the fonts, formatting, colours, and graphics of any source document, regardless of the application and platform used to create it.

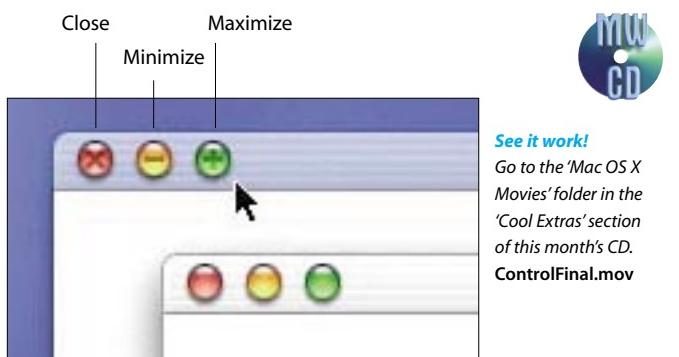
Mac OS X's Aqua interface itself takes full advantage of Quartz's compositing engine, creating translucent controls and menus, and giving the system visual depth with drop-shadows around the edges of windows. Only Apple would bother with this level of detail, and, with Quartz, now only Apple can.

Quartz's foundations include built-in support for PDF, enabling Mac OS X users to embed and manipulate PDF data (including Save to PDF) with any Mac OS X application.

As mentioned earlier, the power of Mac OS X's Quartz layer allows for much of Aqua's flash detailing. For example, the new are lined, have a slightly translucent effect, and cast a shadow to create a pleasing 3D effect. The animated windows/icon transitions are also fun, but may use up a few of your megahertz in their pretty progress.

QuickDraw 3D is officially pushed aside by the integration of **OpenGL** – the industry-standard 3D technology used by games like Quake 3 Arena from id Software, and Star Wars Racer from LucasArts Learning. Since its introduction in 1992, OpenGL has become the industry's most widely supported 2D and 3D graphics API. Apple believes that Darwin's "state-of-the-art" plumbing" actually boosts OpenGL's performance to a new level on Mac OS X, "making it the ultimate PC platform for 3D games and graphics".

Of course, Mac OS X includes Apple's home-grown **QuickTime** technology for streaming Internet media, MP3 audio tracks and videos. Mac OS X applications can embed any audio, video, or image data that QuickTime can handle.



### See it work!

Go to the 'Mac OS X Movies' folder in the 'Cool Extras' section of this month's CD. ControlFinal.mov

Windows get a bright new set of traffic-light buttons. Windows are now 'minimized' by being sent to the Dock – and not left as hanging title bars. You can operate Aqua's new buttons even on inactive windows (see above), leaving your active window live and ready for your next command. To switch window, move your cursor over the left-hand side of the inactive window and press the green button. The buttons reveal +, - and x visual cues when you mouse over it – handy for the colour blind. All three become less prominent when the window is not the frontmost window.

This new placement is rather like Windows' title-bar controls, but better spaced to discourage clicking errors. Also better than Windows, the Minimize control goes in between the opposing Close and maximize controls. In Windows, it's all-too easy to click 'close' when you mean 'maximize', and vice versa – giving you the precise opposite effect than you desired.

A purple button to the right-hand side switches the view to Single Window Mode.

### See it work!

singlefinalsor.mov

The Dock sits at the bottom of your screen and holds folders, applications, documents, and storage devices (hard disk, Zip, DVD, etc.). It can also hold just about anything else you'd like to keep handy for instant access: QuickTime movies, digital images, links to Web sites, or minimized windows (push that amber button now).

Each item you store there is displayed in the Dock as a colourful. Because the Dock allows programs to update its icons, they can provide useful feedback about the applications and documents they represent. For example, an email program will display the number of new messages received within the Dock icon. If you store an image, the Dock shows it in preview mode, so you can tell what it is without opening it.

The old Applications menu – currently found at the far right of the top menubar – is no longer needed as you can minimize running applications into the Dock. A glance at the bottom of the screen tells you what applications you're currently running. To switch between tasks, you need simply to click the application or document icon you want to start using – it then becomes the new active task. The Apple Menu also disappears from Mac screens thanks to the Dock.

According to Apple's Ken Bereskin, the Dock can hold as many items as you want to keep there, although a figure of 128 has been mentioned in some reports. As you add items, the Dock expands until it reaches the edges of the screen. Once it reaches that point, the icons shrink proportionately to accommodate additional Dock-able items. This could make items in a packed Dock even harder to make out than today's titchy pics. So, to make the smaller icons more legible, Apple has designed an impressive new feature called Magnification. As you pass your cursor over the Dock's icons, they individually fan out to magnify to your preset maximum resolution. This is one of Aqua's biggest Wow features, and knocks the socks off dockfinalsor.mov

### See it work!

Windows' Active Desktop Taskbar.

The Finder icon will always be the leftmost icon in the Dock, with the now-wastebasket-like Trash icon always at the right. Bereskin says that Apple is looking at ways to allow grouping active applications and user links in the Dock, which would free-up Dock space. The Dock does away with the Apple Menu, Applications menu and Control Strip, but Aqua merely refines the Mac's basic interface



### See it work!

geniefinal1sr.mov

The Mac's 'zoom rects' – animated rectangles that display transitions in window states – have always put it in a different class to Windows. Aqua goes overtime on these subtle behaviours. Window swoosh down to an icon to fit into the "dock", and then stretched back out from the dock to become windows. Apple calls this graphic feature the "genie effect", as it resembles the mythical passage of Aladdin's genie to and from its lamp.

elements, such as buttons, windows, and scroll bars. Moving to OS X from OS 8 shouldn't require too much head scratching.

Apple Guide also gets the heave-ho, with Apple moving entirely to an HTML-based Help system that allows developers to use the same documentation code for both OS X and their own Web sites.

## Finder binder

While today's Finder takes up the whole of your screen, Mac OS X's easy-to-navigate Finder can be fully contained within a single window. This is a major step away from the present format of hard disk on desktop by default. You will be able to keep an icon link to your hard disk on the desktop, but its default position will be inside the new Finder window.

The Finder's large icon-buttons – like those in Mac OS 9's Sherlock 2 – instantly transport you to the most frequently accessed areas on your Mac: Computer; Home; Apps; Docs; Favorites; People (network); and, View. Click on the Home button and the File Viewer immediately takes you to your Home directory – which can be located on your hard disk drive or on a network. It's a more intuitive, visual refinement of the old Finder, Chooser and Network Browser.

## Gentle journey

With a single-OS strategy – as opposed to Microsoft's multiple variations of Windows – Apple is dedicated to providing a "gentle" 12-month migration from Mac OS 9 to Mac OS X. Eventually, you'll have to move to Mac OS X – in a couple of years time, all applications will be optimized for it.

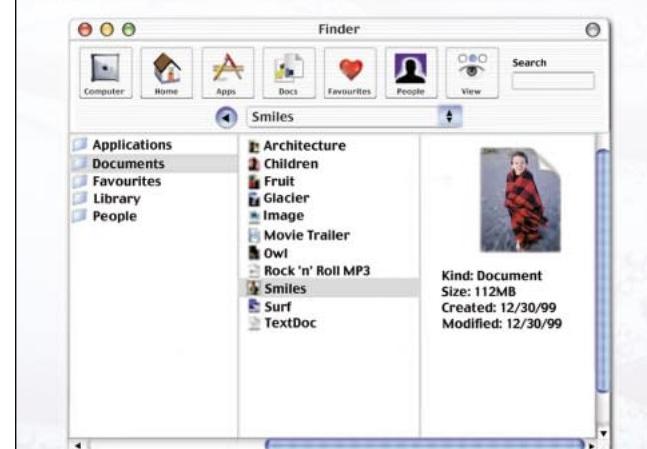
Mac OS X is an entirely new operating system compared to OS 9. That's pretty scary, until you realise that Apple has merely refined the interface you'll be dealing with, rather than changing it utterly and making us learn everything anew. But, behind the Aqua-fuelled interface, the architecture is radically different. And those of us who made the switch from System 6 to 7 and from 680x0 chips to PowerPC processors, are naturally nervous that moving to Mac OS X is going to be a real strain. Incompatibilities, bugs and bombs are the usual guests on any OS or chip switch, but Apple has thought well-ahead this time.

To make the switch as gentle as possible, Apple has created not one but three applications environments in Mac OS X: Classic, Carbon, and Cocoa.

Under **Classic**, Mac OS X can run most of the over-13,000 existing Mac apps without modification. The programs you work with now will run exactly as they do on Mac OS 9 – but won't take advantage of OS X's modern architecture or new Aqua interface.

**Carbon** applications, on the other hand, are programs that have been specially optimized to run on Mac OS X. It's a mix of old and new, in a kind of Catherine Zeta Jones/Michael Douglas way – except you can take it seriously. Unlike Classic, they'll use the new interface, and take advantage of all the modern features of the core OS – such as protected memory for "crash-resistant computing" and preemptive multitasking for a more responsive system. At Expo, Steve Jobs demoed a Carbonized version of Microsoft's Internet Explorer 5 beta, which immediately took on all of Aqua's liquid appearance.

Apple expects most of the popular Macintosh applications to be available in "Carbonized" versions this summer.



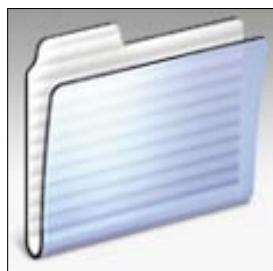
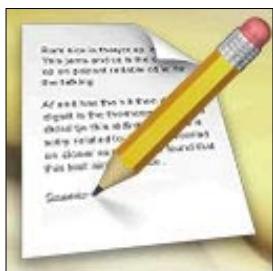
With today's giant hard drives, DVDs and fast networks, files often multiply faster than we can cope with them – forcing you to create more and more nested folders. Even Ferdinand Magellan would have had trouble navigating a full 27GB hard drive. Mac OS X offers us a whole new way of navigating our drives and networks.

Mac OS X's new File Viewer gives you three different options for viewing your file system: Icon; List; and, Columns. The Icon view (top picture) is pretty similar to the one we're all used to – except, with the bigger icon size, they're a bit like the old (and now thankfully discontinued), horrible Button-view.

In OS X, double-clicking on items in the icon or list views no longer brings up separate windows. Instead, the view on the new folder replaces the old folder view within the single File Viewer window. As in OS X's Single Window Mode, Apple has made smarter use of screen space – further eliminating the problem of proliferating windows.

Apple has added a new Column view (bottom picture) designed to make it easier to navigate deep file systems – and to see what's in them at a glance. Columns list the contents of each folder, and single clicking on a folder creates a new column view to the right of the previous folder view containing the contents of the new folder. Each additional folder spawns a new column to the right of the previously current folder. This makes it easier to move through today's deep file systems or networks. The Column view even maintains a history of your navigational forays in short-term memory. Again, this is initially similar to Windows' file views. But OS X's File Viewer is much smarter. You can pick out relevant files from rich document previews – even QuickTime movies show up as previews with file details.

The File Viewer can access all resources connected to your Mac – from externally connected storage devices like FireWire and USB hard drives, to DVDs, digital cameras, and even the Internet. Under the People button, Apple has made the network an extension of the file system by incorporating it into the File Viewer, making network forays as easy to navigate as your local hard drive.



Aqua blows away the computer's traditional 32-x-32-pixels icons, originally sized for yesteryear's low-resolution displays. Today's larger display sizes and higher resolution levels are ready for Aqua's giant richly coloured 128-x-128-pixel icons – but they'll take some getting used to.

Ironically, just a couple of months after Apple controversially renamed the UK's old trash-can lookalike 'Wastebasket' icon as 'Trash', the new Trash icon (below left) is now a photo of a wire-framed wastebasket. Someone is having a laugh, surely.

## This new OS – from industrial-strength architecture to whizzy new interface – is the hidden final piece in Apple's professional/consumer product line-up.



Mac OS X introduces new dialogue panels that attach themselves to documents in a similar manner to the tool side panels in Kai's Photo Soap, and, to a lesser extent, like the side tabs in Internet Explorer.

In Mac OS X, Save and Print panels – called 'sheets' – now have the visual appearance of dropping down from the title-bar of a window, and stick with that window if you move it around. You can even have multiple interleaved documents, each with its own Print or Save dialogue panel open simultaneously. This means you can complete other tasks before dismissing any panel.

Other new panels can slide out from either side of the window title, and their translucent, shaded quality makes them look as though they're floating above the document. All Aqua menus are semi-transparent, so you can see the contents of the window or desktop pattern beneath it. Moving windows display their contents at all times, unlike today's windows that retain just their borders. Instead of immediately disappearing, elements gracefully fade away after you release the mouse. The basic view gives you the filename field, and a pop-up menu with predefined menus for Application and Documents. You can also create your own lists of Favorite locations.

The genie animation also works with the way sheets come out of their respective Windows.



See it work!  
sheetssource1sor.mov

**Cocoa** is an advanced Objective-C-based object-oriented programming environment that is reserved for Mac OS X's super-fast native applications. However, Apple seems to be more interested in Java than Cocoa's favoured Objective-C programming language. That said, Apple is building several of Mac OS X's key components in Cocoa, including its built-in smart-addressing email client.

Mac OS X's MailViewer lets you drag messages out of the mailbox indexes and drop them into new mailboxes that pop out of its sides. MailViewer has full POP3 and IMAP support, and is intended to be the mail application used with OS X.

Mac OS X will run on any G3 or G4 Macintosh, including the early beige units. It requires a minimum of 64MB of RAM. Apple is not promising compatibility with older Macs running on G3/G4 processor upgrade cards.

Ken Bereskin, director of OS technologies, worldwide product marketing, said Apple doesn't have the engineering time or resources to provide support. In other words, Apple wants you to splash your cash on new Macs not upgrade cards. Upgrade-card manufacturers will, of course, work hard to ensure compatibility. I can't see Apple engineering upgrade-card incompatibility into OS X, so it shouldn't be too long a wait for a solution.

A sure-fire frustration on any major new operating system release is lack of device drivers to ensure compatibility between the OS and your hardware peripherals. Apple claims to have been working closely with printer manufacturers to ensure drivers are ready as soon after the release of Mac OS X as possible. Basic PostScript driver support will be built into Mac OS X, so most laser printers should be able to support basic printing from day one this summer. Generic USB drivers should provide support for most mice, keyboards and removable storage devices. Interestingly, Mac OS X will accommodate multi-button mice, but Apple hasn't announced any plans to create its own such mouse.

Mac OS X will upgrade on top of current systems, using a "one-button" installer program similar to the one available with Mac OS 9.

Already more than 100 developers – including some of the biggest, such as Adobe, Microsoft, Quark, Macromedia, Palm Computing, and id – have committed to supporting Mac OS X. Those companies and more will be busy working on Aqua and all the other Mac OS X developments from now till the operating system's summer release date – possibly as early as Macworld Expo, New York, in July.

### New Mac, from Apple, XXX

After years of trying and failing to properly update the Mac OS, Apple really seems to be on course to produce a thoroughly modern operating system this time. Mac OS X – expect a £99 retail price – is very fast, very smart and very cool. While its bubbly colours and whizzy effects take advantage of Quartz's on-the-fly rendering, anti-aliasing, compositing and built-in transparency features, it's not so flashy that it becomes a distraction – although you can expect much Docking and un-Docking early on. OS X and the iMac should stun first-time buyers in product comparisons with Windows 98 and 2000. This new OS – from industrial-strength architecture to whizzy new interface – is the hidden final piece in Apple's professional/consumer product line-up. The link up will be another step forward for Mac market share.



# Road sense

How to get more mileage from your iBook. **By Christopher Breen**

**N**ot so long ago, if you wanted to be taken seriously as a commutin', computin', highfalutin, warrior of the road, you adorned your person with a parcel of drab devices – a cellular phone, a pager, and of course, the requisite laptop computer – all in grey and black tones. How dull. How common. Thanks to Apple's introduction of the iBook, common is out and colourful is in. Powerful enough for professionals yet affordable enough for students, the two-toned iBook is likely to appeal to a broad range of users – perhaps you are among them.

Although the iBook is a Mac at heart, it's also a laptop. And with laptops comes a whole new corpus of concerns – making the most of battery life, synchronizing your iBook with a desktop computer, and keeping ne'er-do-wells from making off with your machine.

This may sound like a lot for a first-time laptop owner to absorb, but we're here to help. Before you next bundle your two-toned buddy into a backpack, briefcase, or book bag, read through the following tips, tricks, and techniques. With this information, you'll transform your iBook from a cute consumer curio to a productive portable as capable as any other computer on the road.

Continues page 80

### Safe, not sorry

It's unfortunate that the minute you walk out the door with your new iBook, you must start thinking of ways to protect it from theft. Let's face it – the iBook, with its rich blue or orange skin, is attractive not only to you, but also to those who'd like to make your iBook their own. After all, it's a portable and is easy to snatch. Because we want you to own your iBook long enough to gain some benefit from the rest of this article, consider the following security measures.

**Lock it up** Apple's PowerBooks have long carried a security slot for attaching special cables that tie the machine to an anchored object. The iBook lacks such a slot but does come with a foldout

### Coming to terms

When purchasing an iBook, you join the ranks of the Laptop Legionnaires – a group of users with specific computing concerns and a language all its own. If you expect your iBook to walk the walk, you should know how to talk the talk. This glossary of terms will help you make sense of portable prose.

#### File synchronization

The process whereby changes that have been made to a file or folder are made to its duplicate on another computer. For example, if you update a database or an email file on your iBook while on the road, you can use file synchronization to update the copies of these files on your desktop Mac at home.

#### Location Manager

An application that allows you to create groups of software settings for your Macintosh. Using Location Manager, you can change such settings as AppleTalk and TCP/IP configurations, the default printer, the sound level, and the time zone.

#### Power Manager

An integrated circuit that is responsible for tasks such as controlling backlighting, waking your iBook, spinning down the hard disk, controlling the Trackpad, handling some aspects of battery charging, and making sure the iBook doesn't go to sleep while you're connected to the Internet.

#### Processor Cycling

A reduced-power mode that causes your processor to consume less power when idle.

#### Remote Access

The control panel in which you enter and save the user name, password, and phone number for your Internet service provider (ISP). Under Mac OS 9, you can configure Remote Access so that you can run another Macintosh from a remote location.

#### Reset button

A small, indented button that sits just above the iBook's power button, near the hinge. Pressing this button with the pointed end of a paper clip makes the iBook restart.

#### Sleep

A state in which a computer's hard disk stops spinning, the screen shuts off, and just enough power is fed to the computer to maintain the contents of the computer's memory.

#### Virtual Memory

Something that allows your Mac to use free space on its hard disk for short-term memory, or RAM. You can turn on virtual memory by going to the Memory control panel (Apple menu: Control Panels: Memory), but beware: because your Mac accesses the hard disk more slowly than it does RAM, using virtual memory will slow down your Mac.

handle that's devilishly difficult to remove. Loop a security cable or chain through this handle and attach a secure lock to keep your iBook from walking away. Because you don't need a laptop lock, a steel chain and a padlock will do the trick.

**What's the password?** If you plan to use your iBook to take notes in class or update spreadsheets when your flight is delayed, you'll want to keep your data from the prying eyes of others.

With its PowerBook series, Apple provides the Password Security control panel for protecting a PowerBook's hard disk, but regrettably this control panel isn't compatible with iBooks. Even if you choose a custom installation of Mac OS 8.6 and attempt to install the Password Security control panel, your iBook will chuck it at restart.

Apple has provided no solution for password-protecting your iBook with Mac OS 8.6 installed, so you have to use a utility such as Power On Software's £38 On Guard (Softline, 01372 726 333). If you use Mac OS 9, however, you can use the Multiple Users control panel to help fend off prying eyes.

To configure Multiple Users for password protection, simply open the Multiple Users control panel (Apple menu: Control Panels: Multiple Users), click on the On button that appears next to Multiple User Accounts, and close the control panel. The next time you start up your iBook, you'll be presented with a "Welcome to Mac OS" window that contains your name.

To start using your iBook, click on the Log In button, type your password – the same password you used when you first set up your iBook (the one in the File Sharing control panel) – and you're on your way. Although some know-it-alls may figure out a way around this protection, most casual users will be dissuaded from investigating further. If you want to disable password protection, simply open the Multiple Users control panel again and click on the Off button, next to Multiple User Accounts.

Note, however, that if you plan to be away from your iBook for a while and are about to put the iBook to sleep, you should log out (choose Log Out from the Special menu) if you want your iBook protected during your absence. Unless you log out, your iBook will pop back to life without asking for a password.

**Wrap it discreetly** Using the iBook's handle is a convenient way to transport your laptop, but carrying a naked iBook around simply advertises that you have a computer worth stealing. A computer bag, although a little less obvious, is also conspicuous. To disguise your iBook's identity, carry it in a padded backpack designed to carry a laptop. One, is Kensington's SaddleBag (see the sidebar "Road Tools" for details on this and other cool products).

**Personalize your desktop** You can also brand your iBook's desktop so that it can be easily identified later. To do so, create a PICT file that contains a message such as "This iBook belongs to insert your name here, so hands off!" Open the Appearance control panel, click on the Desktop tab, drag-&-drop this file onto the picture frame at the left side of the window, and click on the Set Desktop button. The message you created is now plastered across your iBook's desktop.

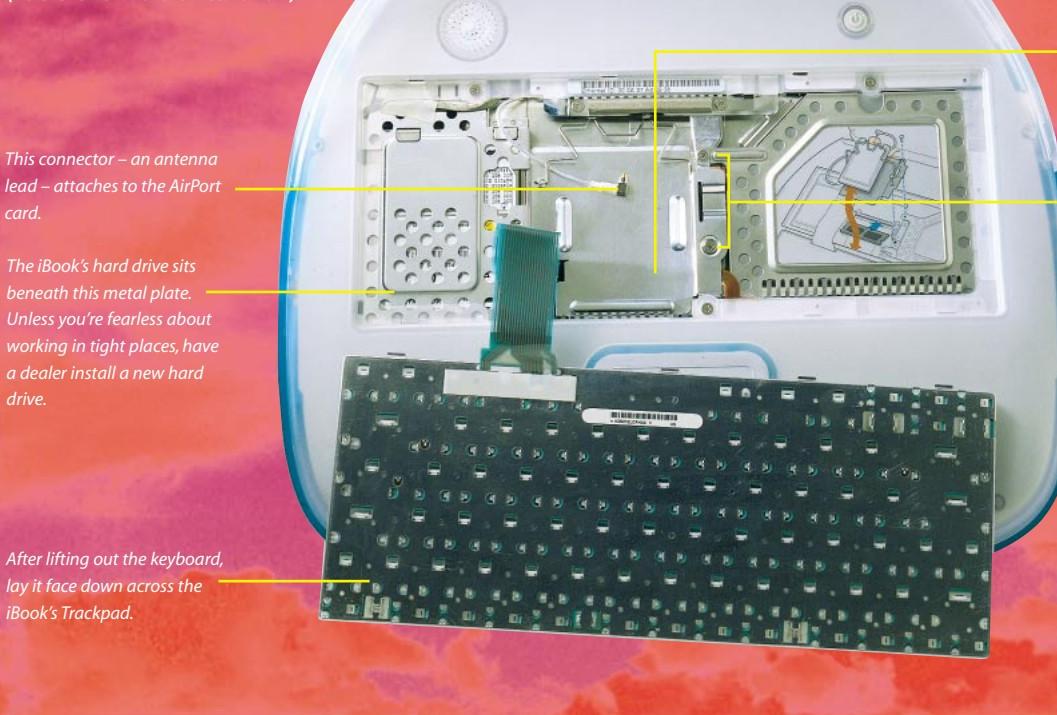
To keep unsavoury souls from removing that message, rename the Appearance control panel something sneaky – Read Me, for example – and replace its icon with a generic text-document icon. To create this icon, find a text document on your iBook (any Read Me file will do). Click on the icon, press **⌘-I** to bring up the Get Info window, click on the document's icon in the upper-left corner of the resulting window, and press **⌘-C** to copy the icon. Now click on the Appearance control-panel file, press **⌘-I**, click on the icon, and press **⌘-V** to replace the Appearance icon with the text icon. Now drag your renamed Appearance control panel to somewhere safe (and somewhere you're likely to remember). Users who aren't Mac-savvy will have trouble removing that message from your iBook, but you can change it, of course. Simply double-click on the disguised Appearance control panel and select a new desktop pattern.

#### Pump up power

For some people, running out of battery life is an unlikely prospect. But the truth is that it's much more common than you might suspect. Imagine this: you're heading home on the train for the Easter break, but you need to finish a college paper and email it to your tutor the second you arrive in King's Cross. As you pass by Potters Bar, your

### Inside the iBook

(Before removal of the metal shield)



The AirPort card sits atop this plate and is attached to the slotted connector seen at the bottom edge of the plate.

Remove these two screws to lift out the metal cover that hides the RAM slot and insert RAM here.

your iBook from the Software Restore disc to reinstall a piece of software – it won't wake up properly. To recover, reboot your iBook, by pressing **⌘-control-power** (or the reset button).

Selecting Preserve Memory Content on Sleep in the Energy Saver control panel should, in theory, help ensure that your work will still be there when your iBook next awakens. However, you might not be able to get your iBook to stop snoring. If this happens, restart the iBook and hold down the escape key until you see the Happy Mac icon. This procedure tells the iBook to bypass any corrupted file that might be keeping your iBook from booting correctly.

If your battery is running low and you have a spare, just swap it, right? Not exactly. Beware of haphazard battery swapping, because you can lose your work if your iBook isn't plugged into a powered socket. Pulling a battery switch without having the iBook plugged in wipes out the contents of the computer's short-term memory – the information stored in its RAM chips. To preserve the contents of RAM while the iBook sleeps, open the Energy Saver control panel, click on the Advanced Settings button, and check the box next to Preserve Memory Contents on Sleep, under Sleep Options.

**Reset the Power Manager** With time, it's possible for the Power Manager to become corrupt, causing your iBook to act strangely – refusing to recognize the AC adaptor, failing to wake from sleep, or being unable to charge the battery. You're probably wondering how this happens, but it's not a bug – it's just one of the quirks of working with an Apple portable. To reset the Power Manager, shut down the iBook, press the reset button (located above the power button near the hinge) with the end of a paper clip, wait five seconds, and press the power button to restart.

**Search for unexpected power sources** All these thrifty habits won't protect you from eventually running out of juice. When the "battery low" warning appears, you'll need to think fast.

If you're using your iBook at the airport, find a seat near a power outlet and plug in. Scope out the location of any power outlets in classrooms, lecture halls, and meeting rooms (and carry an extension cord with you). On a long flight, try giving your iBook a little extra charge by using the outlet in the plane's lavatory. The battery takes two hours to fully charge, so unless the plane's completely empty, you shouldn't attempt to charge the iBook for more than a couple minutes at a time.

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## The Airport arrives

The iBook wasn't the only big news at last summer's Macworld Expo. Steve Jobs also introduced AirPort wireless networking, a technology he promised would free iBook users from the tether of their telephone cords and let them surf the Web and send email without ever having to plug in.

It took a while, but at press time, Apple finally delivered the goods. You can now buy a £79 (incl VAT) AirPort card for your iBook and a £239 (incl VAT) Base Station (Apple Computer, 0870 600 6010) and surf without wires to your heart's content.

AirPort technology doesn't begin and end with the iBook, however. This method of connecting computers without cables has also found its way into two other members of Apple's computing family – the newest iMacs and Power Macintosh G4s. It's sure to be included in the next generation of PowerBooks as well. Considering that AirPort technology is likely to be a part of everyone's Mac experience in the near future, perhaps it's time to learn what makes it tick.

**What is AirPort?** AirPort is a slick technology that provides you with all the convenience of a wired network – transferring data from Mac to Mac, connecting to the Internet, and printing to a printer in another room – but without the fuss of cables.

The centre of an AirPort network is the AirPort Base Station, a flying-saucer-shaped device that carries a 56K modem as well as a 10BaseT ethernet port. As many as ten AirPort-

equipped devices can communicate with a single AirPort Base Station, and you can create larger networks by adding more Base Stations.

Apple claims that AirPort devices can transfer data at up to 11 Mbits per second – close to the speed of 10BaseT ethernet – over a distance of up to 150 feet. Because AirPort uses radio waves, which can travel through walls, AirPort devices needn't be within each other's line of sight. That means you can tap away on your iBook in the living room and print your work on the printer in the den without ever leaving the comfort of your sofa.

**How does it work?** The AirPort technology's flexibility gives you a lot of options. For instance, you can wirelessly access the Web from your iBook by either connecting a phone line to the Base Station's internal modem or, if you're a DSL (Digital Subscriber Line) user, by attaching this speedy line to the Base Station's ethernet port.

This ethernet port introduces a world of possibilities. You can connect to any ethernet-equipped Macs, PCs, or printers simply by attaching them to the Base Station. If you use an ethernet crossover cable, you can quickly connect to a single Mac. To attach an entire network of computers, use an ethernet hub and standard ethernet cables.

Don't feel left out if you're a PowerBook user. If you have a PowerBook 190, 5300, 1400, 2400, 3400, or G3 Series, and you're using Mac OS 7.5.5 or later (or even if you have a Windows PC with a PCMCIA slot), use the £230 (ex VAT)

SkyLine Wireless PC Card (Farallon 01372 726 333), to connect to an AirPort network. Although this card provides data-transfer rates of only two Mbits per second, it does offer an extended operating range – up to 300 feet indoors. To wirelessly connect two AirPort-bearing Macs, you don't need an AirPort Base Station. With these Macs, you can use the software's AirPort Control Strip and switch from using the AirPort Base Station to a direct Mac-to-Mac connection.

Soon, using a scheme Apple has dubbed AirPort Software Base Station, you will be able to use the modem of one of your AirPort-equipped Macs to act as both Macs' conduit to the Internet.

**Who needs it?** From what we've seen so far, it looks like educators, students, and gamers – and the people who support them – will quickly grasp the value of AirPort technology.

With AirPort hardware in place, students can waltz into a classroom with their iBooks, select the AirPort Base Station from the AirPort Control Strip, enter a password, and get started – no more labs full of deskbound Macs that must be reconfigured for each class.

Gamers using AirPort technology will be up within minutes – without stringing cable to a central ethernet hub and mucking about with arcane AppleTalk and TCP/IP settings.

For a review of the AirPort Base Station and AirPort Card, see page 48 of February's *Macworld*. Alternatively, you can visit Macworld Online, at [www.macworld.co.uk](http://www.macworld.co.uk).

## Getting around

Have you ever wondered why the word mouse has become a verb – as in "I was mousing around on my Mac the other day" – and the word touchpad hasn't? It's simple: your hand was meant to mouse, it was not meant to touchpad. Regardless of how long one uses the Trackpad, it never feels as natural as a mouse. These tips may make your "Trackpadding" feel a little more natural.

**Mouse tracks** It's sometimes it's difficult to locate the on-screen cursor, particularly when you're using the iBook in direct sunlight. To find it more readily, open the Mouse control panel (Apple menu: Control Panels) and switch on Mouse Tracks (see the screen shot "Making Tracks"). Doing so causes the cursor to leave temporary vapour trails. Select the Thick I-beam option in this same control panel to create a more visible I-beam cursor.

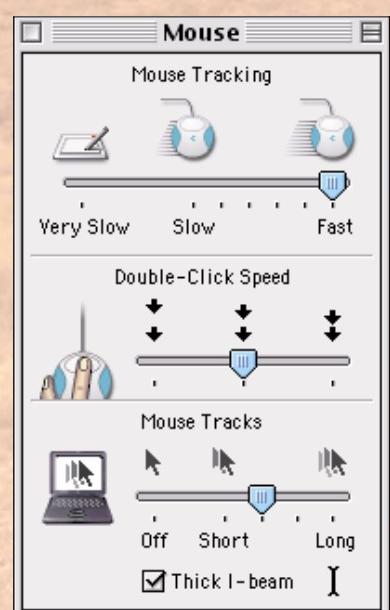
### Rules of the road

Chances are, you bought an iBook because you planned to take it on the road with you. When travelling or working from remote locations, it's important to remember these helpful tips:

**Quick-and-dirty hard copy** What if you need to print a file but don't have an accessible printer? If you're working from a hotel room, there's an easy solution: fax the document to the hotel's fax machine. Students may be able to use this fax trick with sympathetic librarians and professors.

**Slide show** Photography students laden with slides may want to show off their work to fellow students and professors. With an iBook, they easily can. Just open the iBook so the top lies flat, select a desktop pattern that's completely white, turn up the brightness all the way, and place the slides on the screen. Instant light box.

**Staying in sync** In all likelihood, you have a Mac on a desk somewhere in addition to your iBook. A good way to stay up-to-date on both Macs is to synchronize the files they contain. Here's how:



### Making tracks

If the cursor's hard to see turn on Mouse Tracks in the Mouse control panel.

trouble moving the cursor in small increments, open the Trackpad control panel and select a slower tracking speed. At a slower tracking speed, your finger movements don't need to be as exact, so you can more easily zero in on your target. Some people find it cumbersome to use the iBook's bottom bar to double-click. To avoid using the bottom bar, turn on the Use Trackpad For Clicking option. Now just tap on the Trackpad to click.

If you don't care for the iBook's Trackpad or keyboard, attach a USB mouse and keyboard and navigate your iBook just as deskbound Macintosh users do. Likewise, attach a USB joystick or game pad for better control over games.

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Create a folder – called Road Work, for example – and place it on your iBook's desktop. Create a folder with the same name on the computer you use at home. When you travel, place any documents you've worked on in this folder. When you return home, use Apple's File Synchronization control panel to synchronize the two folders.

## Road tools

Even with all the perks it provides, an iBook can benefit from a few well-chosen add-ons. When you take your life on the road, consider bringing these items with you. (All prices include VAT)

**iMate** For those Macintosh users who are still big fans of old ADB peripherals – mouse, keyboard, and joystick – this £39 USB-to-ADB adaptor may be a godsend. (Griffin Technology; 0171 622 6606).

**USB 6GB Hard Drive** By today's standards, the iBook's 3.2GB hard drive is considered cramped. To provide more storage, try this £268 device. (Computers Unlimited 0181 358 58 57).

**Targus Travel Connection Packs** If you're taking your iBook overseas, you'll need telephone and power adaptors. Port offers two collections – Global phone pack, £49; Global power pack, £29. (Targus, 0181 607 7000).

**SuperDisk** If you'd like to use floppy disks as well as a roomier storage medium, the £151 SuperDisk is a good compromise – allowing you to use floppies, as well as Imation's own 120MB disks. (Imation, 01344 402 200).

**Zip 250 USB Drive** Just about every computer today seems to have a Zip drive. Thanks to this slim drive's USB interface, for £198 your iBook can have one too. (Iomega, 0353 1807 5133).

**MouseWorks** Although the iBook's Trackpad is reasonably responsive, you may still miss using a mouse. Try out this £57 USB four-buttons-and-a-wheel input device. (Computer 2000, 01256 868 008).

**Screen wipes** Even the cleanest of hands can smudge an iBook's screen. Disposable towelettes can help you keep it spotless. They are available from most high street stores and computer specialists. Also, if you find



the iBook's keyboard a wee bit flat, you can add elevation by using the £15 iCoolPad. (Teleadapt, 0181 233 3086).

**SaddleBag** This good-looking and durable £36 backpack will protect your iBook and make it easier to carry. (Computer 2000, 01256 868 008).

Or if you use AOL and another ISP, for example, you can create a unique group of settings for each. You can easily switch from one group of settings to another, using the Location Manager module in the Control Strip.

If you have a single ISP and need to change dial-up phone numbers for different locations, don't fiddle with the Location Manager. Instead, open Remote Access – you'll find it under Control Panels in the Apple menu – select Configurations (⌘K) from the File menu, click on your ISP's configuration, and then click on the Duplicate button to create a new configuration. Name this new configuration something memorable, such as "School", click on the Make Active button, enter a new phone number in the Number field, close the Remote Access window, and save when prompted to. Now when you want to change configurations, just select the configuration you desire from the Remote Access control strip.

**Remote control** While on spring break, you realize that your copy of *101 Jokes about Ladas* is tucked away on the hard disk of your desktop Mac. You know that joke number 52 is going to be a great hit with your friends. If only you could retrieve it! Relax – with Mac OS 9, you can. Unlike previous versions of the Mac OS, Mac OS 9 incorporates both the send and receive components of Apple's Remote Access.

This means that you can use your iBook to call your desktop Mac, and then you can mount its hard disk on your iBook's desktop – just as if it were attached to a local network – and easily copy files between the two computers.

## The last word

With these tips, you've taken your first steps toward becoming a road warrior. Before long, you too will begin thinking like a laptop user – seeking ever greater security measures, trying to match Apple's fabled claim of six-hour iBook battery life, and making your iBook a full member of your computer family. Now close the lid and wind up that power cord. It's time to hit the road.



### Changing places

Apple's Location Manager allows for swapping multiple configurations with one click.

**Email on the server** When travelling, configure your email program – most likely Microsoft Outlook Express – to keep copies of your messages on the server, the computer where your Internet service provider (ISP) stores your email. That way, when you return home, you needn't copy your email database to your desktop machine. Simply log into your email account with your desktop computer and download all your messages again.

**Shifting locations** Hey, you're going mobile with your iBook, and when you bounce from place to place, it's nice to have your portable pal pre-configured when you reach your next destination.

Apple's Location Manager lets you create different groups of settings to use at different locations (see the screen shot above). Create unique Internet and time settings for use at your college in London, your home in Surrey, and your holiday cottage in Cornwall.

# Snap decision

Two-megapixel digital cameras assessed. **By David Fanning**

Digital photography has come a long way in the past few years. Digital cameras are now at a stage where a good-looking A4 picture can be printed on a low-end ink-jet. To achieve such results requires at least a two-megapixel camera – the class of camera that we tested for this feature.

A two-megapixel camera has a resolution of over two million pixels, although not all those pixels are addressable in every mode. A two-megapixel camera might boast only a 1,600-x-1,200-pixel resolution (1,920,000 pixels), because it uses its remaining pixels for other modes.

At this level of camera, there are few bargains – with average prices between £500 and £600.

Two-megapixel digital cameras are mid-range between consumer snappers and top professional gear. This band of users are stuck with the “prosumer” label. Some of the cameras – the Olympus C-2500, in particular – have professional features. However, there’s still some ground to make up before many pro photographers go digital. Resolution is no longer a big issue, but factors such as external-flash features and lens adaptors are important.

Digital cameras will make some inroads into professional photography, but professional photographers will not change en masse overnight. It’ll take years, with many photographers preferring the look-& feel of film.

So although the target audience for two-megapixel cameras does include professional photographers, it also embraces the non-expert professional

**continues page 87**



# Editors' Choice: top three

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Breakdown

Test



## Olympus Camedia C-2500

Of all the cameras tested, no other made so many demands of the user. This is not necessarily a bad thing, as it makes for better photographs. Fully automatic cameras do a pretty good job of guessing what you want, and then deliver it. The Camedia is capable of this too, but when you want to do something more than point-&click, it comes into its own. If you're buying this model, its hefty price tag of £1,199 means you probably don't want a camera that operates itself.

The most remarkable thing about this camera is that its 1.8-inch LCD monitor can't be used as a viewfinder. If you're used to other digital cameras, this may sound inconvenient – yet LCD screens are often difficult to see in bright sunlight, and never give a perfect view of the subject, offering little more than a handful of reduced pixels. Using a traditional optical viewfinder gives a clearer view of the subject, so Olympus makes you use it. Once the picture is captured, you can then view it on the LCD screen, which is also used for settings and management.

Memory is provided by a choice of CompactFlash or SmartMedia cards – or both. There's two slots, so you needn't worry about which format is to hand.

The built-in flash pops up from above the lens, which is both stylish and functional. More important for serious photographers is the chance to use an external flash. Olympus even provides a flash unit – the Camedia FL-40 – designed especially for its digital cameras.

The Camedia C-2500 has a standard 43mm thread and a step-up ring, which means most lenses and filters are useable.

## Macworld buying advice

The Olympus is sturdy, professional and comes with a big, juicy manual. It requires a level of commitment from the user to learn each of its many features – but if you want a camera capable of professional use, this is it.



## Sony DSC-F505

The DSC-F505 offers plenty to lure traditional photographers over to digital. Its most striking feature is the huge Carl Zeiss lens that dwarfs the rest of the body. It has a 5x optical zoom and a special lens-coating to reduce glare and flaring. If a 5x zoom is not enough, then there's a 10x digital zoom too.

Storage is provided by the Memory Stick – similar to, but incompatible with, all other camera storage formats. This is a drawback, but the USB interface is as quick as a digital card-reader, so it needn't be a problem.

The whole package is similar to the Olympus, but with a simpler, lighter-hearted approach. Where the Olympus is stoic and complex, the Sony is simple and fun. MPEG movies are possible with sound, and you can use effects like Solarization, Sepia, Negative Art, Fun, and other non-essential options.

For all its silliness, the DSC-F505 takes impressive pictures and is flexible without all the automatic settings. The features are easy to reach, making it very user-friendly.

Sony claims the InfoLithium battery has a positive effect on memory, and the battery life is conveniently shown in minutes. This makes life much easier than the three bar battery indicators found on other cameras. One drawback of digital photography is the need for so much power. The Sony battery lasts longer than most. Even better, the camera can be plugged directly into the mains for indoor shots.

## Macworld buying advice

The DSC-F505 can't keep up with the Olympus C-2500 – but at almost half the price, why should it? With its giant lens the Sony is a real head-turner and it's fun to use. If you need the professional features and control of the Olympus, spend the extra money. If you can get by without external-flash attachments and other pro features, the Sony is a real bargain.



## Canon PowerShot S10

Sometimes, you don't want to lug around a great big lens-heavy camera. Getting good photographs usually relies on you having your camera with you when the shot is ready. You may not carry your SLR-style digital camera with you at all times, but the PowerShot S10 is small enough to slip in your pocket.

Because the PowerShot is small, you may be surprised at the quality of pictures you can achieve. At 1,600-x-1,200dpi, images are good enough for most uses, including A4 prints.

It sports a powered 2x optical lens that telescopes out of the front when turned on. Because the lens is automatically covered when retracted, there's no lens cap to lose. It has no digital zoom – but digital zooms aren't as good quality as optical zooms anyway.

Storage is via an 8MB CompactFlash card, and there's USB and serial interfaces for downloading directly to a Mac.

Its size means that if you use AA batteries, there's room for only two. Rechargeable batteries are included, and it can also run directly from the power supply. Canon claims a fully charged battery will allow you 230 shots. However, this is without using the LCD viewfinder in optimal conditions. Normal AA batteries offer less life.

April will see the launch of a successor to the PowerShot S10 – the PowerShot S20. The S20 will have a three-megapixel resolution capable of 2,048-x-1,536-pixel images.

## Macworld buying advice

At only 105-x-69-x-34mm, the PowerShot S10 is the smallest digital camera in the two-megapixel class. It's a simple camera – just point-&click for most situations. Despite its lack of gadgets, its pictures are better than some models that sport more buttons and lights. Canon is an old and respected camera manufacturer, so this quality should come as no surprise.



## Olympus Camedia C-2500

Optical Zoom	£1,199
Digital Zoom	x3
Highest resolution	none
Lens	1,712-x-1,368 from 2.5 Mpix
LCD screen	F 2.8-3.9
Storage Media	1.8" TFT
Capacity of supplied Media Card	SmartMedia/CompactFlash
Interfaces	8MB
Power Supply	Serial
Software	AA batteries
Contact	Camedia Suite
Star Rating	Olympus Optical (0207 253 2772)

★★★★★/9.1

## Sony DSC-F505

Optical Zoom	£699
Digital Zoom	x5
Highest resolution	x10
Lens	1,600-x-1,200 from 2.1 Mpix
LCD screen	F 2.8-3.3
Storage Media	2" TFT
Capacity of supplied Media Card	Sony Memory Stick
Interfaces	4MB
Power Supply	Serial/USB
Software	Lithium battery
Contact	PictureGear Lite 3.2
Star Rating	Sony (0990 111 999)

★★★★★/8.9

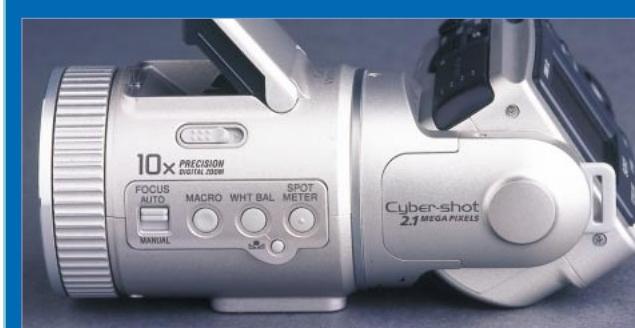
## Canon PowerShot S10

Optical Zoom	£599
Digital Zoom	none
Highest resolution	x2/x4
Lens	1,600-x-1,200 from 2.11 Mpix
LCD screen	F 2.8/4.0
Storage Media	1.8" TFT
Capacity of supplied Media Card	CompactFlash
Interfaces	8MB
Power Supply	Serial/USB
Software	Lithium cell
Contact	Adobe PhotoDeluxe
Star Rating	Canon (0500 246 246)

★★★★★/8.9

All prices include VAT

features



### Main feature

The Sony DSC-F505 boasts a range of basic but fun features that are ranged down the flank of its huge lens.



### Toshiba

Toshiba's PDR-M5 impresses with its neat control layout, as well as its curvy case design. Many of the controls will be familiar to film-photographers.



### Long sighted (left)

The massive Carl Zeiss lens that comes with the Sony DSC-F505 has a 5x optical zoom and a special lens-coating to reduce glare and flaring.



### Thanks for the memory (right)

The Olympus Camedia C-2500 has two memory-card slots – one for CompactFlash and one for SmartMedia.

Specs



design

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Test

Specs

**Epson PhotoPC 850z**

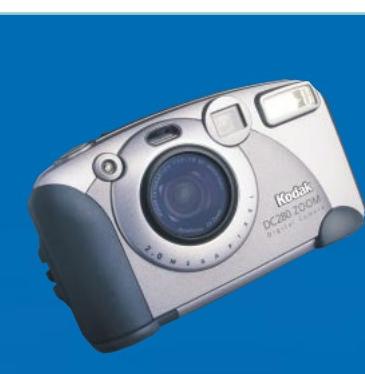
The PhotoPC 850z is a 2.1-megapixel camera, but it can output three-megapixel images. A con, surely? Well, yes and no. Images are interpolated – a bit of a cheat – yet results are stunning. Normally, interpolated images – whether from cameras or scanners – suffer from blocky artefacts. The images from the PhotoPC 850z don't seem to suffer from this.

The high-resolution images are useful for printing on high-end ink-jet printers. To this end, the 850z can print directly to most of the Epson range of ink-jets – a convenient way of bypassing your computer.

It has plenty of high-end features, such as a hot shoe for an external flash gun, an adaptor for additional lenses and filters, and a 3x optical zoom – plus a 2x digital zoom. Also, most of its features are manually adjustable, giving maximum control over the image.

**Macworld buying advice**

This 850z lacks some of the high-end features of the Olympus C-2500 and some of the fun features of the Sony. But it does have a good balance of pro and consumer features – and at a decent price.

**Kodak DC 280**

The DC 280 is smaller than most Kodaks, and has a higher resolution. It has generous storage capacity of 20MB on a Compact Flash card – enough room for 245 pictures at the standard resolution.

Kodak was one of the first manufacturers to realize that USB was important, especially to Mac owners, and the 280 has USB and Mac serial connections for downloads. Remember though, downloading 20MB of images over a serial connection will take forever and a day.

The pictures were sharp, but the white balance wasn't perfect. Its features' interface is simple and intuitive, and it offers a number of digital effects. The DC 280 doesn't have many pro features, such as external flash or lens mounts, but would be fine for use in the fields of property sales or insurance. This is because its automatic settings can be set by any rookie and the result always be pleasing.

**Macworld buying advice**

Simplicity is sometimes as good a feature as super-high resolution. This camera is ideal for non photographers who want fuss-free, yet impressive, images.

**FujiFilm MX-2900**

This camera offers plenty of high-end features, like a hot shoe for external flash, 43mm thread for additional lenses and filters, and an optional Fuji-branded wide-angle lens. This makes for a rugged semi-pro camera with many manual controls for optimum images.

FujiFilm has opted to forgo the loose rechargeable battery route in favour of a single rechargeable cell. This means that the battery life is excellent, but when you run out, you're stuck. But for convenience, simply plug in your camera rather than messing with batteries.

There's an option to print directly from the camera, but only to FujiFilm printers. However, both Epson and Hewlett-Packard have printers in the works that will be capable of printing directly from CompactFlash or SmartMedia cards.

**Macworld buying advice**

The FujiFilm MX-2900 is similar to the Epson 850z, both matching each other feature for feature. The only way to separate them is by shopping around for a bargain on price.

**Toshiba PDR-M5**

The curviest camera on test, the Toshiba is big but attractive. I know looks don't influence image quality and functionality, but then looks aren't important to a car's performance either. In many ways, the PDR-M5 is similar to the Epson 850z, but with a curvier case. The controls are similar, but it has no high-resolution mode.

Compared to the S10 it's bulky and plasticky. Functionally, it does a fine job – but as an object of desire it doesn't quite make it. It does have some nifty features, though – such as the ability to record small AVI movies. These are ideal to send as email attachments, and are a fun gimmick.

As with other consumer-oriented cameras, its white-balance performance is less than perfect, but images were sharp, if a little noisy in places.

**Macworld buying advice**

At £649, this camera is not the best deal around: its price is too close to the Sony and Canon for it to be competitive. Nonetheless, it's a good consumer camera – but would be a far more attractive purchase if Toshiba was to shave a few pounds off the price.

**Casio QX200UX**

The Casio is a very capable consumer-level camera. It offers a resolution of 2.1-megapixel and a 3x optical zoom, which makes it one of the better point-&click models. Sadly, it lacks any of the sophisticated features of the semi-pro models, so it's competing with models such as the Canon PowerShot S10.

Compared to the S10 it's bulky and plasticky. Functionally, it does a fine job – but as an object of desire it doesn't quite make it. It does have some nifty features, though – such as the ability to record small AVI movies. These are ideal to send as email attachments, and are a fun gimmick.

There's no support for external lenses or flash. And in our tests, the white balance failed to compensate adequately for the tungsten lights we were using. Outdoor pictures were better, but not perfect.

**Macworld buying advice**

Although a good camera, the Casio QX200UX's price tag of £599 puts it in competition with the Sony and the Canon – but it struggles to compete in this price range and should be more affordable.

**Olympus Camedia C-21**

Olympus has a great high-end model in the C-2500, but the C-21 is aimed at consumers with smaller budgets.

Its aluminium casing is smart, but the design of the lens cover presents problems: it's essentially a door that slides down to expose the view-finder, which also acts as the on-switch. This means that, when adjusting settings on the back of the camera, it's all-too easy to catch the door by mistake and switch off the camera.

While the automatic settings are fine for normal use, all settings are capable of manual adjustment. It lacks a zoom lens, but does have a digital zoom function. It's capable of printing directly to a printer, but is compatible only with Olympus brand printers – which is unfortunate, as it's unlikely you already have an Olympus printer.

**Macworld buying advice**

This camera offers Olympus quality at a budget price. It may not have the looks of the Canon compact camera, but the quality is right up there with it. At almost £150 less, I think most people can ignore the aesthetics.



Optical Zoom	£639
Digital Zoom	x3
Highest resolution	1,984-x-1,488 from 2.11 Mpix
Lens	F 2.11
LCD screen	2" TFT
Storage Media	CompactFlash
Capacity of supplied Media Card	8MB
Interfaces	Serial/USB
Power Supply	AA batteries
Software	Adobe PageMill, Epson Photo!
Contact	Epson (0800 220 546)
Star Rating	★★★★★/8.7

Optical Zoom	£699
Digital Zoom	x2
Highest resolution	1,760-x-1,168 from 2.1 Mpix
Lens	F 3/3.8
LCD screen	1.8" TFT
Storage Media	CompactFlash
Capacity of supplied Media Card	20MB
Interfaces	Serial/USB
Power Supply	AA batteries
Software	Adobe PageMill & PhotoDeluxe
Contact	Kodak (0870 243 0270)
Star Rating	★★★★★/8.6

Optical Zoom	£599
Digital Zoom	x3
Highest resolution	1,800-x-1,200 from 2.3 Mpix
Lens	F 3.3/5.7/6.11
LCD screen	2" TFT
Storage Media	SmartMedia
Capacity of Media Card	8MB
Interfaces	Serial
Power Supply	Lithium cell
Software	Adobe PhotoDeluxe 3.0, Home Fujifilm (0207 586 5900)
Contact	
Star Rating	★★★★★/8.8

Optical Zoom	£649
Digital Zoom	none
Highest resolution	1,600-x-1,200 from 2.14 Mpix
Lens	F 3.5-5.7/6.11
LCD screen	1.8" TFT
Storage Media	SmartMedia
Capacity of Media Card	8MB
Interfaces	Serial/USB
Power Supply	Lithium cell
Software	Toshiba
Contact	Toshiba (01276 62 222)
Star Rating	★★★★★/7.9

Optical Zoom	£599
Digital Zoom	x3
Highest resolution	1,600-x-1,200 from 2.14 Mpix
Lens	F 2/2.8
LCD screen	1.8" TFT
Storage Media	CompactFlash
Capacity of Media Card	8MB
Interfaces	Serial/USB
Power Supply	AA batteries
Software	Casio
Contact	Casio (0181 450 9131)
Star Rating	★★★★★/7.5

Optical Zoom	£595
Digital Zoom	none
Highest resolution	1,600-x-1,200 from 2.14 Mpix
Lens	F 2.4/8
LCD screen	1.8" TFT
Storage Media	SmartMedia
Capacity of Media Card	8MB
Interfaces	Serial
Power Supply	Lithium batteries
Software	Camedia Suite
Contact	Olympus Optical (0207 253 2772)
Star Rating	★★★★★/8.5

All prices include VAT

**Nikon CoolPix 800**

Nikon has long supported the twist-in-the-middle design for its digital cameras, but the CoolPix 800 moves away from this novelty-value design.

As with previous models, images are sharp – but the white balance failed to produce a perfectly toned image. As with other models that had difficulty with white balance under tungsten light, the 800 fared better in natural light.

Focus has always been a strong point with Nikon digital cameras, and the 800 has the familiar judder of the constantly updating auto-focus. It's a little disconcerting, but the results speak for themselves.

One unique feature is the Best Shot Selector. This takes a number of pictures in rapid succession and then selects the sharpest. It's a novel way of working, and appears to work.

**Macworld buying advice**

The CoolPix 800 is a capable mid-range camera, but the black plastic finish makes it look cheap. At £699, it isn't cheap, unless you're comparing it to the forthcoming Nikon D1 that'll cost more than £3,000.

**Ricoh RDC-5300**

This camera has the look of an older consumer 35mm camera – chunky and heavy. Although the LCD viewfinder image was noisy, the final image was fine. It does have a pre-set white balance for tungsten lighting, though the results we achieved with this setting were disappointing. Other shots using automatic white balance fared better in more natural light.

It has a USB interface, essential for large images, but appears to lack a Mac serial connection. This is not a problem for modern Mac owners, but people with older machines may be left behind. However, if you're using a pre-USB Mac, spending more than £500 on a camera seems less sensible than upgrading your old Mac to at least an iMac.

The interface is simple to use and the camera has a basic selection of controls. This makes it idiot-proof, but does limit control over results.

**Macworld buying advice**

This is a decent but overpriced camera. I suspect, though, that this will change before long – because for an extra £50 you could choose either the Sony or the Canon.



£699

Optical Zoom	x2
Digital Zoom	none
Highest resolution	1,600-x-1,200 from 2.11 Mpix
Lens	F 3.5-4.8
LCD screen	1.8" TFT
Storage Media	CompactFlash
Capacity of supplied Media Card	8MB
Interfaces	Serial
Power Supply	AA batteries
Software	Adobe Photoshop 5.0 LE
Contact	Nikon (0800 230 220)
Star Rating	★★★★★/8.7

£549

x3
none
1,792-x-1,200 from 2.3 Mpix
F 3.2-3.7
1.8" TFT
SmartMedia
8MB
Serial/USB
AA batteries
Ricoh Photo Suite
Johnsons Photopia (01782 753 300)
★★★★★/7.8

around £100 but will reduce your download times to a couple of seconds – instead of hours.

Memory cards are solid-state storage media that store images like miniature floppy disks. There are two main formats – SmartMedia or CompactFlash.

Even with USB Macs, it's more convenient to buy a card reader than to mess around with cables every time you take a picture. You can leave the card reader plugged-in permanently, and pop the card in for instant access to images. Only Sony breaks format, using its proprietary Memory Stick card. There isn't anything especially better about the Memory Stick – it's just a device to make you buy Sony-branded peripherals, whether you want to or not. A bigger drawback is that, currently, there's no Mac-compatible Memory Stick reader available, so you're stuck with USB-only picture downloads.

**Macworld buying advice**

If you're going to buy a work camera that several people are likely to use, it's best to keep it simple. Digital cameras are no more complicated than film cameras, but sophisticated features may scare off novices. The fewer buttons the better.

If the camera is for personal use, there's a reassuring feeling of expense about ploughing through a breezeflock of a manual. If you have the budget to go for the Olympus C-2500, you'll be rewarded with a camera that gives you a mental workout. It isn't that it's difficult to use – there's just plenty of features to get to grips with. When you've mastered these functions, it can produce fantastic pictures. Even in automatic mode, it outputs pretty amazing images. If the £1,200 price tag doesn't scare you, then the opportunity to add an external flash and extra lenses should. If you get carried away, you can spend a small fortune on this camera.

Not too many budgets will stretch as far as the C-2500 – but Sony has a more affordable alternative in the DSC-F505. It's almost all lens, and sports plenty of gadgets. Although falling short of being a serious professional camera, it's a lot of fun. It has an AVI-movie function and effects such as Victorian sepia-tone.

So-called pocket-sized cameras usually rely on people having outsized pockets – but the Canon S10 really is the slinkiest, dinkiest model around. And it still takes excellent high-resolution pictures.

None of the cameras disgraced themselves in our tests, and all would be a good buy at the right price. Prices quoted here were correct at press time – but the cut-throat world of digital photography means prices drop quickly. New cameras like the Canon S10 and the Sony DSC-F505, both retailing at around £600 to £700, will force less worthy contenders to drop in price before long.

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# Dream on

Dreamweaver 3 is a boon for Web designers. By Tom Negrino

**T**ools for Web designers have come a long way. No longer do Web-page creators struggle with a mélange of lousy programs to get the job done. Whether you're a code-shy graphic designer, a jaded HTML geek, or someone in between, you can probably find a Web tool that dovetails your skill level.

Now, Macromedia's £299 Dreamweaver 3, (Computers Unlimited, 0181 358 5857; £99 upgrade) is hitting the scene, offering an unprecedented mixture of friendly visual tools and fast, powerful access to the HTML code that underlies all Web pages.

This new version builds on the program's traditional strengths; adds a slew of features that enable collaborative teams to work together to build sites; and, of course, supports the latest other programs from Macromedia, such as the new Fireworks 3 (see the sidebar "Fireworks 3 Fights Back").

ILLUSTRATION: GRAHAM MURDOCH

## Better Web pages

The quality of your individual pages is the ultimate test of your skill as a Web developer – and Dreamweaver 3 doesn't disappoint in this department, with new features that make it easier and faster to create first-rate Web pages and meet deadlines.

**Tags on demand** Perhaps the most innovative new feature in Dreamweaver 3 is Quick Tag Editor, a pop-up window that allows you to view and edit the underlying HTML code for any object while you're still in the visual editing environment. Previously you had to take time to switch out of visual editing and open an HTML window to get at the code. With Quick Tag Editor, you can peer beneath the surface of your document.

To invoke Quick Tag Editor, select an object and choose Quick Tag Editor from the Modify menu, or better yet, press **⌘-T**. The free-continues page 96



#### History Repeating

You can select a series of entries in Dreamweaver's History palette and turn them into a macro by choosing Save As Command.

floating Quick Tag Editor appears, showing you the HTML associated with that object (see the screen shot "Code on demand"). To help you write code, a pop-up hints list appears when you pause while typing in Quick Tag Editor, showing you a list of all the HTML tags Dreamweaver understands. The hints list is context-sensitive, so if you pause on a particular tag, a list of its attributes appears.

Quick Tag Editor is terrific for quick edits, and you see the results immediately. Let's say you've inherited a table from your predecessor and it has a border ten pixels wide and cell spacing of eight pixels. You want a cleaner look, so you select the table and press **⌘-T** to call up Quick Tag Editor. In the Edit Tag window, change border=10 to border=1, and cellspacing=8 to cellspacing=0. Then press the enter key to accept your changes, and the table assumes its new look. You could also use the floating Properties palette to modify these attributes, but hardened HTML code jockeys will find using Quick Tag Editor a much more familiar and efficient way of making changes.

**History Palette** The ability to undo a mistaken action is good, but having almost unlimited undos is even better. Dreamweaver 3's new History palette keeps track of what you've done, and a slider bar lets you move backward and forward through your actions (you set a preference for the number of undos available, but most people won't need to go beyond the default setting of 500). If you want, you can even select and replay one or more steps.

However, the undo feature is limited to actions you take from the keyboard; if you drag out a table with the mouse, the History palette can't track and repeat the action. But if you insert and specify the table's attributes with keyboard commands, you can replay them as much as you want.

Have you ever done a bunch of intricate formatting and wished you could save your steps so you wouldn't have to do them again? With Dreamweaver 3, you can. You'll need to perform the actions once, making sure that you use the keyboard whenever possible. Then select the steps in the History palette and choose Save As Command from the pop-up menu in the palette (see the screen shot "History repeating"). Name the new command, and it appears in the Commands menu.

What's happening behind the scenes is that Dreamweaver is translating your steps into JavaScript code and then saving that code in a form it can reuse.

**A new kind of style** No matter what kind of site you're building, chances are you've settled on a certain set of type attributes you're going to use throughout — say, slightly larger than normal type in Arial or Helvetica, coloured dark blue, and in a bold face. Up to now, most programs have let you format text with <font> tag

attributes or Cascading Style Sheets (CSS), and Dreamweaver 3 retains these abilities.

Both approaches have their problems. CSS styles display reliably only in version 4.0 or later browsers, and even then your Web pages can look different depending on the end-user's browser version.

In general, <font> tag attributes display accurately in any browser, but if you want multiple attributes as in our earlier example (bold, blue, and larger), you have to apply them individually — and repetitively — to each text selection.

Dreamweaver 3 has finally merged the ease of use of CSS with the compatibility of <font> tag attributes, in a feature called HTML Styles. The new HTML Styles palette, which displays all the styles for the site you're working on, holds both character and paragraph styles. To apply a style, you simply select some text and click on the style name. You can create new styles by selecting text that's already formatted the way you want and then choosing Text: HTML Styles: New Style. In the resulting dialogue box, you give the style a name and add or modify other font and paragraph attributes as you see fit (see the screen shot "Stylin").

Dreamweaver stores a site's HTML Styles in an XML document in the site folder, making the styles available to anyone who works on your site. XML stands for Extensible Markup Language; it's a more flexible cousin of HTML, that Dreamweaver uses to store many different kinds of data, including styles, its own menus, and page templates. Having a separate style sheet also makes it easy to collaborate with other workgroups and helps ensure that companies with multiple sites maintain a consistent look by using the same XML style sheet.

#### Time-savers

With its big new features, Dreamweaver 3 should satisfy your lust for more, more, more power! Yet the program also has lots of small but useful improvements that will make your work go more quickly and cut down on your boredom quotient.

**Do that again!** This year's "Cool, but why didn't it do that before?" award goes to the new Repeat Last Action feature, which works with the History palette to give you the remarkably useful ability to redo whatever you last did by pressing **⌘-Y**.

This feature makes quick work of crushingly dull text-formatting jobs when you combine it with HTML Styles. For example, say you have sub-heads throughout a page and you want to apply a style to them all. Define an HTML Style with those attributes, and then apply the new style to the first subhead. Select the next subhead with the mouse, and press **⌘-Y** to repeat the style application.

**Setting foundations** with Templates On the Web, consistency isn't the hobgoblin of little minds; it's the sign of a professional. Dreamweaver's templates are perfect tools for keeping your pages consistent. You can edit the default template (you'll find it inside the Dreamweaver folder, in Configuration: Templates: Default.htm) to make sure that all the pages you create contain the proper <meta> tags, with your company and copyright information. Dreamweaver includes any changes you make to the default template on every page it creates from then on.

**Clearing cobwebby code** You don't just build a Web site and leave it — it requires regular maintenance to stay vital. Cleaning up old HTML code is a dull task that you probably know better than you ever wanted to and would love to simplify. You might need to clean up old code that a previously used WYSIWYG tool employing proprietary tags left behind — Adobe PageMill, say. Or you might want to strip out old, deprecated tags from previous versions of HTML. You can use the search and replace features in Dreamweaver 2 or 3, along with regular expressions, as your garbage collector. Here's how, with the hated <blink> tag as our example.

Choose Replace from the Edit menu. From the pop-up menu next to Find In, choose whether you want to apply your changes to the current document, the current site, or a folder that you select.

Set the Find What pop-up menu to HTML Source, and click on the Use Regular Expressions check box.

## Making Dreamweaver 3 work magic

Everyone likes to watch a magician performing a routine. But while some people simply enjoy magic tricks as entertainment, some of us remain frustrated until we know exactly how the magician did it.

Dreamweaver 3 is a lot like that magician. You can simply sit back and enjoy its magic, or you can go behind the scenes of the software and learn its tricks yourself. The advantage of the latter approach is that you can then change its tricks — not only can you pull a rabbit out of a hat, but you can also change that rabbit to a mouse or even an elephant if you choose. All it takes are three magic words: HTML, JavaScript, and XML.

Start your quest for knowledge by finding the Configuration folder inside your Dreamweaver folder. Inside this folder and its subfolders lie hundreds of HTML, JavaScript, and XML files. Dreamweaver uses these files for just about everything it does — if you change any of them, you can change the way the program behaves.

#### A rabbit out of my hat

When modifying Dreamweaver, you must change the right file to achieve the right effect. Here's a tour of the Configuration folder to show what's hiding where. (A word of warning: Before changing a file, always make a copy of it first. That way, if things don't go right, you can just put the original back and start again).

**Behaviours** This folder contains two subfolders: Actions and Events. You can create a Dreamweaver behaviour when you combine an event with an action, in a cause (the event) and effect (the action) relationship. The Events folder consists of one HTML file per browser type, each containing a list of the events that browser supports. The Actions folder contains an HTML file for every possible action in Dreamweaver, and many of these have a corresponding JavaScript file.

As an example, say you want to play a sound when the user mouses over an image. You'd need to combine the onMouseover

Let's Play

An HTML file is at the heart of this Dreamweaver dialogue box.

event with the Play Sound action. When you choose Play Sound, Dreamweaver displays a dialogue box that's defined in the file Play Sound.htm, located in the Actions folder (see the screen shot "Let's play"). The Actions folder also contains Play Sound.js, which stores the JavaScript code that Dreamweaver inserts in your page to make a sound play.

**Commands** Each item in Dreamweaver's Commands menu corresponds to an HTML file in the Actions folder. (While behaviours add an action to your page, commands act upon the page itself). For instance, the Clean Up HTML command gets its dialogue box from the Clean Up HTML.htm file, and the JavaScript file Clean Up HTML.js handles the actual clean-up.

**Inspectors** This folder contains the HTML and JavaScript files that modify the Property Inspector floating palette for particular tags. When you want to change the <title> tag, for example, the Property Inspector palette gets its dialogue box from the title.htm HTML file. The title.js JavaScript file then does the actual work of changing the title of your page.

**Menus** This folder contains two items: menus.xml and the MM folder. The MM folder holds files that correspond to every command in every Dreamweaver menu. The menus.xml file tells Dreamweaver under which menu and in what order those commands should appear, as well as what keyboard shortcuts to assign them. To change Dreamweaver's menus, you just change this file. Removing lines from this file is a handy way to create a streamlined and simplified set of menus for less savvy users.

**Objects** When first installed, this folder contains six subfolders: Characters, Common, Forms, Frames, Head, and Invisibles. Each of these corresponds to a submenu in the Objects palette and to an entry in the Insert menu. In addition to an HTML file, each object has a corresponding GIF file containing the icon for that object in Dreamweaver's Objects palette. To add a new object, just add a GIF and an HTML file. To add a new sub-folder, create a new subfolder in the Finder and put your desired objects in it.

**Start-up** If you want a command to run every time you launch Dreamweaver, all you need to do is write an appropriate HTML file and put it in the Startup folder. Similarly, if you want a command to run whenever you quit Dreamweaver, add a Shutdown folder (it doesn't exist at installation) containing your HTML command file. or each of the above folders, modifying the enclosed files enables you to change how a command or behaviour acts within Dreamweaver.

#### Nothing up my sleeve

Not only can you add, change, and delete extensions in your copy of Dreamweaver, but you can pass your changes on to others, too. A number of Web sites also offer Dreamweaver extensions for download; two of the best are Dreamweaver Depot, at <http://people.netscape.com/andrew/dreamweaver> and the Dreamweaver Extensions database, at [www.idest.com/cgi-bin/database.cgi](http://www.idest.com/cgi-bin/database.cgi).

Combine downloadable extensions and your own modifications, and you can create a version of Dreamweaver 3 unlike anyone else's — one that uniquely fits your work habits. When the tricks you've performed with your Web-authoring program of choice amaze your audience, just smile and say, "It's magic."

**Dori Smith** is co-author, with Tom Negrino, of *JavaScript for the World Wide Web: Visual QuickStart Guide, third edition* (Peachpit Press, 1999), and author of *Java for the World Wide Web: Visual QuickStart Guide* (Peachpit Press, 1998).

Code on Demand  
Pressing ⌘-T provides handy instant access to HTML code from within Dreamweaver's graphical interface.

Type the following inside the Find What box: <blink[^>]\*>. Don't type anything in the Replace With box. That regular expression (see "Transform HTML with Regular Expressions," Create, November 1998) selects the opening <blink> tag, and if the tag has any attributes, it selects those, too. Click on either the Replace or Replace All button. To get rid of the closing tag, type </blink> in the Find What box and then click on either the Replace or Replace All button again.

**Instant site prototyping** People tend to use Dreamweaver's Site Manager feature mostly to detect and mend broken links, upload and download files from the remote server, and ensure that only one person is editing a file at any given time. But Site Manager is also perfect for creating and mapping out the initial structure and pages of your site. After you've done — offline — the really hard work of figuring out the structure of your site (see "Dress continues page 98

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# Fireworks 3 Fights back

Putting together pages isn't a Web designer's sole task. You've got to have content for those pages – and often that means preparing lots and lots of graphics. It's fortunate that Dreamweaver 3's companion product, the £179 Web-graphics utility Fireworks (upgrade, £99; with Dreamweaver, £380, Computers Unlimited, 0181 358 5857) has also received an update.

Fireworks is locked in a tough fight with Adobe Photoshop. Adobe has rolled Web-graphics features into Photoshop 5.5 and includes Fireworks competitor ImageReady with every copy of the program. To fight back, Fireworks 3 incorporates many of the graphics effects on which Photoshop veterans have come to depend, while adding some impressive automation features both new and seasoned Web designers will appreciate.

## Take it easy

Summed up in one phrase, Macromedia's vision for Fireworks would be, "Don't work so hard!" Most of the new features in Fireworks 3 aim at providing maximum flexibility while eliminating repetition.

No addition embodies this directive better than the new History palette. Although at first glance this feature may appear to be little more than a cheap imitation of Photoshop's own History palette, behind that less-than-glamorous face is a useful tool that not only removes mistakes but also automates tasks at the click of a button.

**Making History** The History palette is a close cousin of Fireworks' Undo command. But unlike the latter, which requires you to backstep through recent actions one at a time, the History palette lets you undo and redo multiple editing steps with a few clicks (see the screen shot "Room for error").

As you work, Fireworks records a complete list of all recent actions in the History palette. To return to a previous setting, you simply move the palette's slider up and down the list of steps; the page updates to reflect the selected stage of the design.

Say you've spent ten minutes making a series of changes to your image, but now you're not sure you want them. By clicking back and forth in the History palette, you can do quick before-and-after comparisons and

judge whether the alterations are worth keeping. If not, place the slider on the last version you like and revert to that one. You can even undo Save commands if you accidentally wrote over a previous version of your document.

How many actions the History palette records is up to you (the default setting is 20), but the more actions you save, the more Fireworks taxes your Mac's memory.

**Redoing commands** Just as impressive as the ability to undo commands is the ability to redo them at will. As with Dreamweaver 3, Fireworks 3 allows you to select groups of actions from the History palette and save them as independent commands.

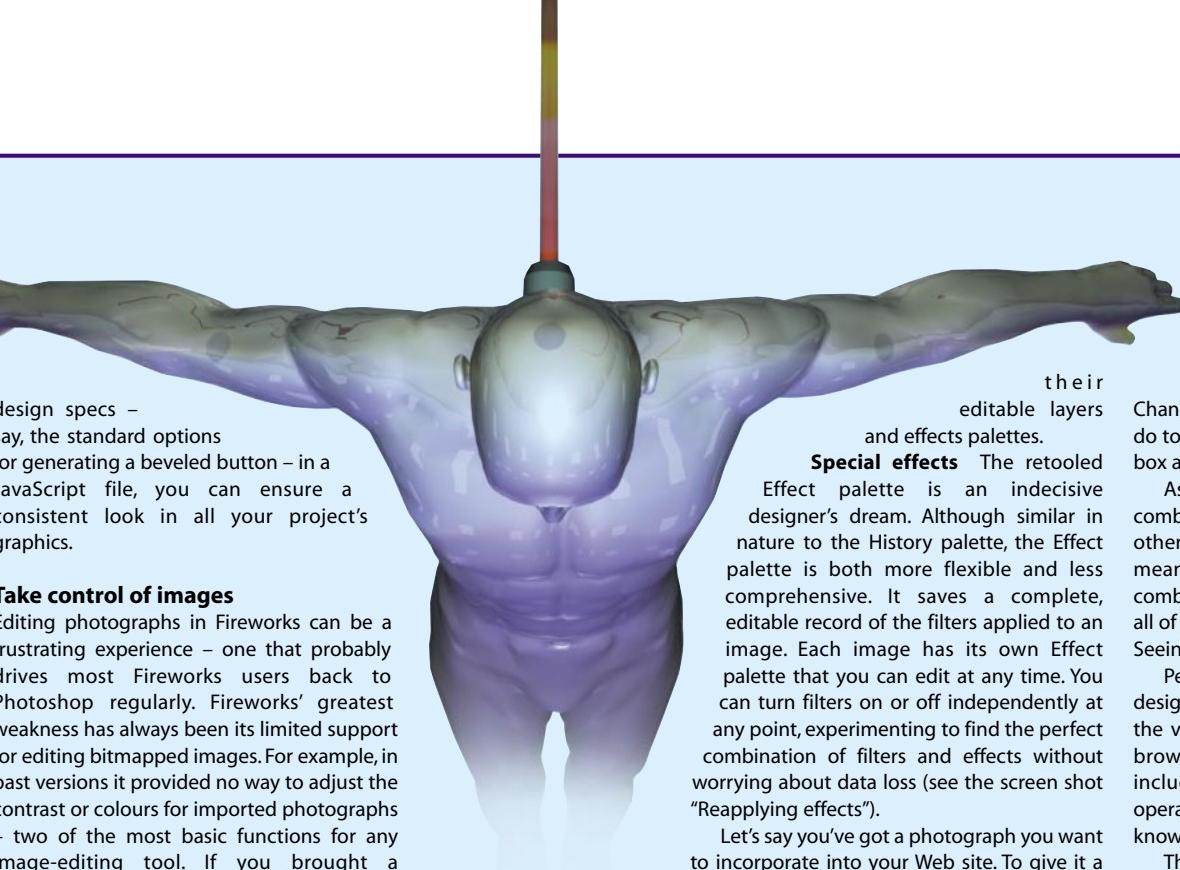


## Room for error

The History palette lets you quickly toggle between your current document and earlier versions, and a pop-up menu even lets you save a group of commands for later reuse.

For example, say you've created a navigation bar with ten black buttons, each with a unique shape. At the last minute, your client decides that all these buttons should be green, with beveled edges and a texture. Rather than changing them one at a time, just change the first one, select the relevant steps from the History palette, choose Save As Command from the palette's pop-up menu, and specify a name. Now all you have to do is select the other buttons one at a time and choose your new command from the Commands menu.

Since commands are just JavaScript files, you can share them with coworkers – whether they're working in Fireworks on Macs or on Windows PCs – who need to make similar changes. By standardizing a project's



design specs – say, the standard options for generating a beveled button – in a JavaScript file, you can ensure a consistent look in all your project's graphics.

## Take control of images

Editing photographs in Fireworks can be a frustrating experience – one that probably drives most Fireworks users back to Photoshop regularly. Fireworks' greatest weakness has always been its limited support for editing bitmapped images. For example, in past versions it provided no way to adjust the contrast or colours for imported photographs – two of the most basic functions for any image-editing tool. If you brought a Photoshop file into Fireworks, you lost the ability to edit layers and layer effects.

**True colours** In Fireworks 3, Macromedia has begun to address some of these shortcomings. The most useful improvement is the addition of image-correction tools such as brightness and contrast, hue and saturation, levels and curves. This means you no longer have to turn to another program, such as Photoshop, to fix photos that need only basic image editing. Designers can adjust colours, remove scratches, and sharpen photos, all within their Fireworks document.

Fireworks 3 also allows you to incorporate your favourite Photoshop filters and plug-ins. You can even use these filters on vector graphics and text without rendering them uneditable. Whereas earlier versions of the program transformed text and vector graphics into bitmapped images before applying filters such as Motion Blur or Spherize, Fireworks 3 retains the selection's original format. You don't have to start from scratch if you discover a typo after applying a filter such as Fire (part of Alien Skin Software's Eye Candy) to your company's logo. Just fix the type with the text tool, and the filter will apply to the new text.

If you do need to use other image-editing programs, you can do so with impunity. Fireworks 3 now opens native Photoshop and Adobe Illustrator documents and preserves

the effects of that filter disappear, leaving all your other effects intact.

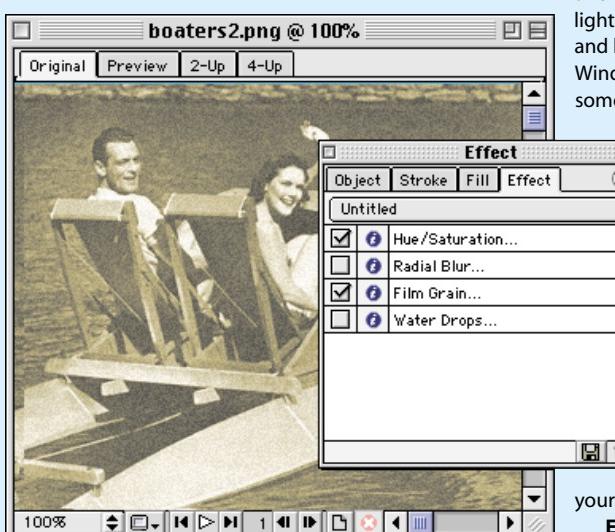
Change your mind later on, and all you have to do to restore the initial blur effect is check the box and turn that filter back on.

As with the History palette, you can save combinations of effects and apply them to other images for maximum efficiency. This means that once you find the perfect combination of effects, you can reuse them on all of your photographs with a single click. Seeing is believing.

Perhaps the most frustrating aspect of Web design is the almost total lack of control over the viewing environment. Differences in Web browsers, monitors, operating systems – including various versions of the same operating system – mean there's no way of knowing exactly what your viewers will see.

The gamma value determines how light (or dark) a monitor displays an image's midtones. Windows uses a higher gamma value than the Mac OS, causing beautifully rendered images from your Mac to look dark and muddy on a colleague's PC.

Many Web designers try to compensate for this difference by blindly lightening photos on the Mac and hoping they'll look okay on Windows PCs. Fireworks 3 takes some of the guesswork out of colour correction with a Windows gamma setting – turn it on by selecting Windows Gamma in the View menu. This way you can switch back and forth between the Windows and Mac gamma until you find the best compromise for



## Reapplying effects

Use the Effect palette to experiment with your favourite filters and plug-ins. The palette records every effect applied to your image; you can toggle effects on and off via the corresponding check box.

features that made Fireworks an early success was the way it helped designers find a compromise between image quality and compact file size. It let users quickly compare the contrasts that exist between multiple image settings via the Export Preview window, which simultaneously displayed as many as four variations on the original image.

Unfortunately, that window was the only place where you could see the effects of size-slipping changes; to see how a particular design element would look when you saved it as a GIF or JPEG, you had to open the Export Preview window, adjust your settings, and then cancel.

Well, no more – in Fireworks 3, without ever leaving the workspace, you can see what your designs will look like. Tabs at the top of the document window let you switch immediately among your work areas and three different windows for previewing how your graphics look on the Web. The 2-Up and 4-Up windows offer multiple views of the same image for comparing the results of different file formats.

You can also use the preview tabs to immediately test rollovers (another of Fireworks' specialties). Previously you had to export the images, tell Fireworks to generate an HTML document, and open that document in a browser window before knowing for sure that your rollover worked correctly.

Now you can easily see how your rollovers will work, by switching to your Preview window and running your mouse over the graphics.

## The last word

Evolution on the Internet is measured in weeks, not years. Companies don't just create a site and say, "Well, that's that!" Instead, they continue modifying and expanding it – sometimes daily. This results in large teams working together under tight deadlines.

Will Fireworks survive the competition from Photoshop? That's up to the users to decide. But with its tight Dreamweaver integration and bevy of new timesaving features, it's certainly got a chance.

**Assistant Editor Kathryn Lunsford teaches desktop publishing at the University of California, Berkeley Graduate School of Journalism.**

*It Up*, page 76, Macworld November 1999), the Site Map window lets you add the actual individual pages and linked pages to your site, complete with page titles and text links between pages.

Working with the site structure as a whole before you get bogged down in designing individual pages will help you organize your site better and make it easier to navigate. After you create the pages you need, you can open them up from the Site Map window to get started on design.

To begin building your site, first define a new site by choosing New Site from the Site menu, giving the site a name and picking the

local site folder. Then choose Site Map under the Window menu. The icon for the home page of the site will be in the Site Map window, as the home-page file is created along with the new site.

To create a new linked file, control-click on the home page's icon and choose Link To New File from the contextual menu. In the dialogue box that appears, name the new HTML file, give the page a title, and enter the text for the link. When you click on OK, Dreamweaver creates the HTML page and an icon for the new page appears in the Site Map window, with a line connecting it to the original page. To create more linked pages from the home page,

repeat the process. You can also add text links to any page with the same technique. A page's text links show in the Site Map as a line of smaller pages under and connected to their parent page.

**Cleaning up after Microsoft Office** A lot of Web content starts out life as Microsoft Word documents. Word makes it easy to save its documents in HTML format, and since Word handles text and graphics, you might think you could dispense with programs like Dreamweaver.

That may be true for very small sites, but Word's limitations for larger Web sites quickly become apparent. The trouble is that extra

code bloats Word-generated HTML documents, making your page load and display slower than it should. The larger a page is, the longer it takes to get through your modem to your browser, and the more time and effort a browser must expend to display the convoluted code.

Dreamweaver 3 solves this problem and saves tons of boring code-stripping work with its impressive new Clean Up Word HTML command. Invoking this command on your Word-generated HTML

continues page 100

files can quickly shrink file sizes by as much as 50 per cent.

There's help in Dreamweaver 3 for Microsoft Excel users, too. Rather than saving spreadsheets and other tables from Excel as Web pages, and then cleaning up Microsoft's messy HTML in Dreamweaver, use the new Insert Tabular Data command to convert any text-only delimited file into a clean table. You can then use Dreamweaver's unmatched table-editing and -formatting abilities to tweak the data's appearance.

### Improving teamwork

As Web sites get bigger, more complex, and more central to many businesses' corporate strategies, they've become too much for one person or even a small team to handle. It's not unusual to have dozens of people contributing to major corporate sites, including designers, content writers, graphic artists, and programmers. Professional-level tools need to offer team management features. Dreamweaver 3 improves site management and adds many other features that make it easier to share sites in a workgroup.

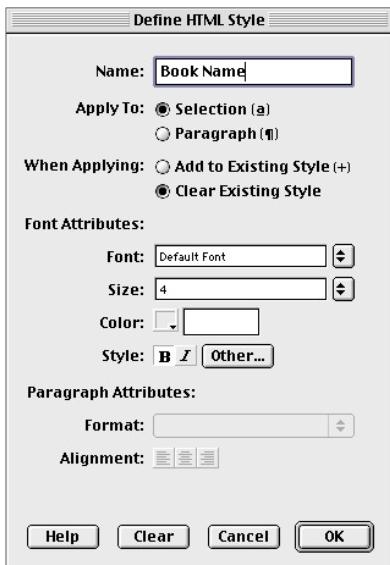
Keeping collaborators posted One of the biggest hassles Web teams face is keeping track of who made what changes to a particular file, and when. Some teams try to deal with this problem by sending e-mail detailing changes. More-sophisticated teams might use a central database to hold change notes. The problem with both these solutions is that the change records don't stay with the file, so they're easy for others to overlook.

Dreamweaver 3's new Design Notes track your changes to HTML pages and let you add date-stamped comments that your coworkers can view and edit. A Design Note for one of your HTML pages is a separate XML document that Dreamweaver keeps in a Notes folder, so it doesn't add to the size of your production file. And since the folder doesn't get uploaded, it doesn't waste space on your server, either.

**Staying in sync with sites** With its new feature that synchronizes local site folders and remote servers, Dreamweaver 3 plays catch-up with competitor Adobe GoLive. This feature ensures that you're never working on an outdated page. The file-synchronization feature compares files in both locations and lets you know which files need replacing.

You get to choose whether to give priority to local or remote files, and you get a summary of all the files that Dreamweaver proposes to move. You can also override the Dreamweaver 3's default recommendations on a file-by-file basis.

If you've made wholesale deletions from your site, Dreamweaver can remove files on the local or remote sides to keep both sites in sync.



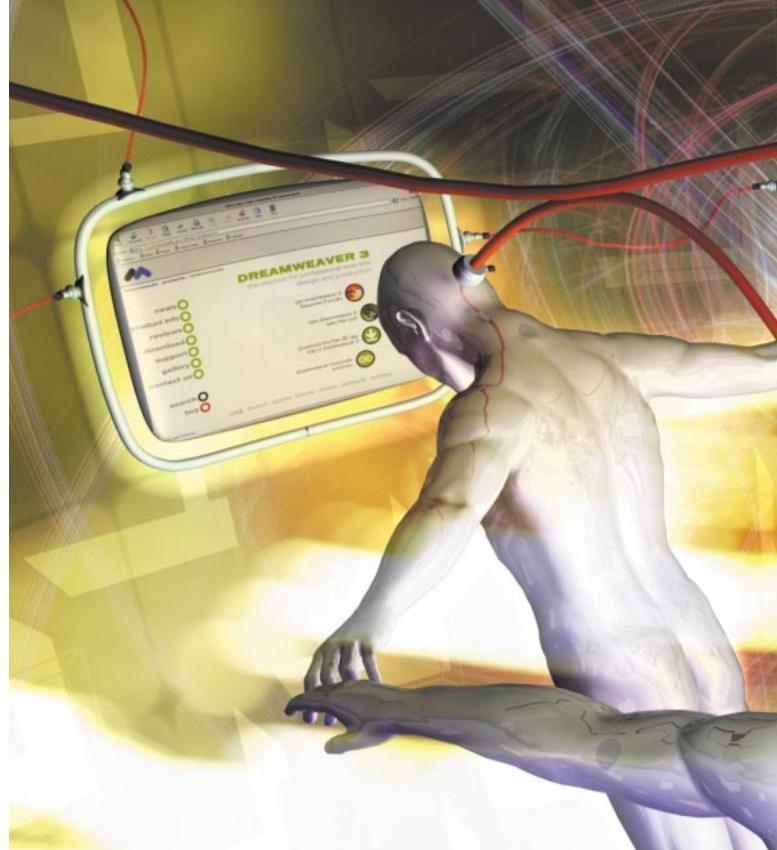
#### Stylin'

HTML Styles work a lot like a word-processing program's style sheets: once you've set up attributes, you can apply them anywhere you like.

### The sky's the limit

Customization is an important part of Dreamweaver's appeal, and Dreamweaver 3 lets almost anyone make use of its extensibility. For example, if you have attractive content on your site, sooner or later some other site managers will hijack your content into a frame on their site. You can tell your pages to burst out of other people's frames, so long as you know how to program this with JavaScript.

With Dreamweaver 2, it was much easier to add features to the program via JavaScript. You could try adding new behaviours and



commands and even change the program's property inspectors if you were proficient with HTML and JavaScript. So adding a script that took your pages out of someone else's frame set became as easy as dropping a JavaScript file into Dreamweaver's Actions folder. A cottage industry of JavaScript coders sprang up to support Dreamweaver's extensibility, writing hundreds of new actions, objects, and commands. In fact, if you're thinking of writing a Dreamweaver extension, check the Dreamweaver Extension Database, at [www.idest.com/cgi-bin/database.cgi](http://www.idest.com/cgi-bin/database.cgi), and make sure no one's already thought of your idea. Dreamweaver 3 takes this customization to an absurd level. Everything in Dreamweaver – menus, dialogue boxes, palettes, and functions – is defined by some combination of XML files, HTML files, and JavaScript.

Because the entire menu system in Dreamweaver is accessible, corporate departments and Web design shops can create custom versions of Dreamweaver with little effort, adding and removing keyboard shortcuts, menu commands, property inspectors, and other features to suit their needs or the needs of their clients. You can give a customized version of Dreamweaver to your clients so that they can make routine content changes and even create new pages from your templates without messing up your designs – all of which frees you from day-to-day content maintenance. (See the sidebar "Making Dreamweaver 3 work magic" for details on how to modify Dreamweaver 3 to suit you).

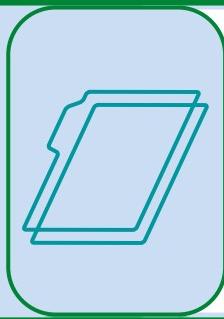
### The last word

Dreamweaver 3 is an impressive successor to an already-good Web design tool. With new features such as HTML Styles and Microsoft Office clean-up, it's easier than ever to create pages and whole sites with Dreamweaver. But you never sacrifice your control over the HTML – instead, tools such as Quick Tag Editor strengthen it. Dreamweaver 3 targets advanced Web-site developers, and Macromedia keeps adding features at the request of users.

The arrival of Dreamweaver 3 is the opening salvo of the latest round of innovation in Web design tools, and Macromedia's chief rival, Adobe Systems, is sure to return fire with the next version of GoLive. But Dreamweaver 3 certainly demonstrates that there's plenty of room for innovation in sophisticated Web publishing tools. Even if Adobe and Macromedia continue to slug it out, the real winners are professional Web-site developers, who will surely benefit from the software improvements that arise from the struggle. **MW**

**Contributing editor Tom Negrino is co-author of *JavaScript for the World Wide Web: Visual QuickStart Guide, third edition* (Peachpit Press, 1999).**

create



pdf

# All in the past



Using PDF to make  
an archive of every  
issue 1999 *Macworld*.

By Vic Lennard

**A**dobe Acrobat has come a long way in the past couple of years. Those of us who have lived with the various foibles in versions 2 and 3 are now reaping the rewards of staying with them.

Version 4 is flexible enough to allow you to achieve a result in different ways. It also has some nice features, especially the ability to create presets for different projects within Distiller. Similarly, Acrobat Reader 4 now has an index and search facility, that has been put to good use for the 1999 *Macworld* Past Issues CD, included free with this issue.

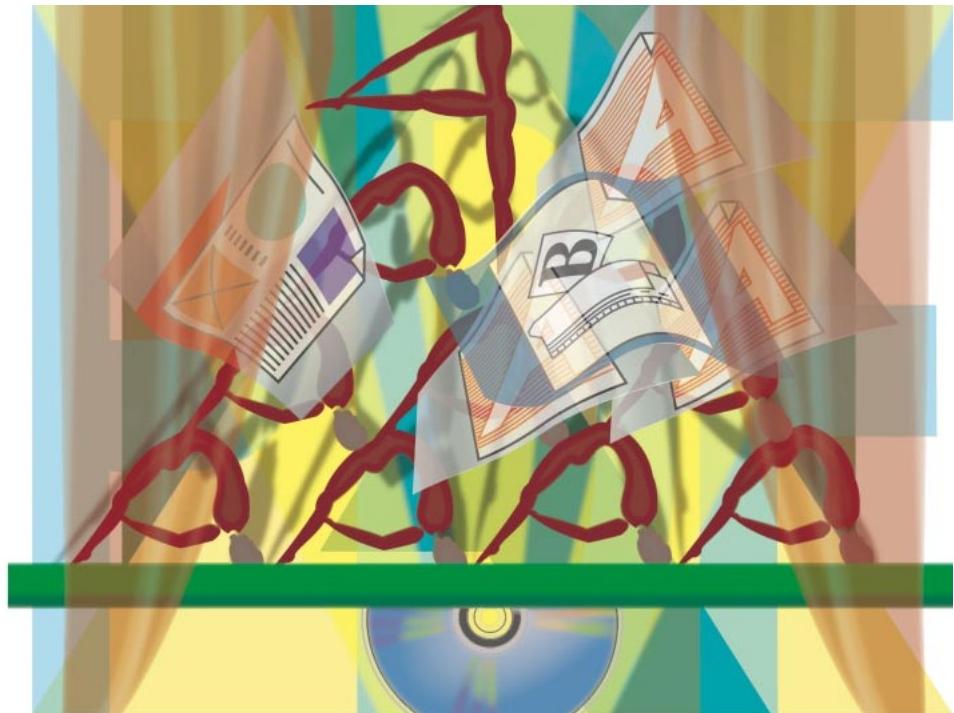
## The brief

The key to the project was to transfer the ethos behind *Macworld* pages to Acrobat PDFs. For this to happen, the PDFs had to be consistent with the magazine pages – *Macworld* uses a number of fabulous double-page spread graphics each month, some in the background, some as main images. Breaking up such graphic content into single pages would have ruined an important effect, so spreads had to remain as spreads.

There are a number of ways to navigate between the pages of a PDF – bookmarks and thumbnails are the most common. With an average of 70 editorial pages per issue, thumbnails would be difficult to use. Additionally, the floating bookmarks palette can be toggled on and off by the F5 function key – very user-friendly.

The next problem was how to move between the monthly issues without continuously going to the Finder and double-clicking on the various PDFs. The obvious solution was a separate PDF acting as a central selector, with images of the covers – each linked to the PDF of the relevant issue.

But, how do you get back to the selector from within an issue? This uses Acrobat's Forms function (see "A well-formed button"). At the bottom left of each cover is a "Return to Issue Selector" button that allows you to move freely from month-to-month, without leaving Acrobat Reader's



environment.

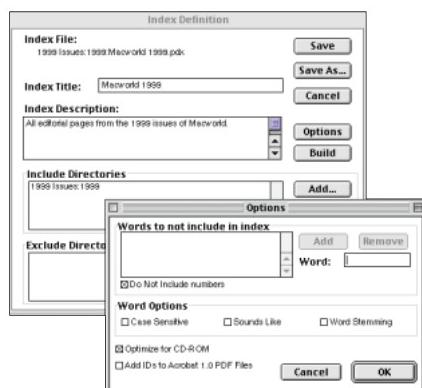
The main reason for having a year's worth of *Macworld* on CD is to be able to look for a particular product, or technology, quickly and easily. To this end, all 856 editorial pages had to be indexed and searchable.

## Creating the PDFs

*Macworld* is designed in QuarkXPress 4, and version 4.1 was used for the PDF creation. This has some neat features on the PDF front, including PDF Export where Distiller's job options can be overruled. Also, parameters such as hyperlinks and bookmarks can be set up, though the latter use lists and the Index 1.1 XTension – an entire article could be written about this.

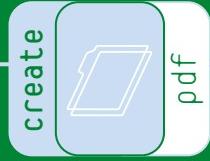
I used AdobePostScript 8.6 and Virtual Printer. This method writes files in the background – allowing for work in XPress

continues page 105



## Index Definition

Acrobat Catalogue makes short work of creating the searchable index. The Options dialogue allows control over excluded words and numbers.

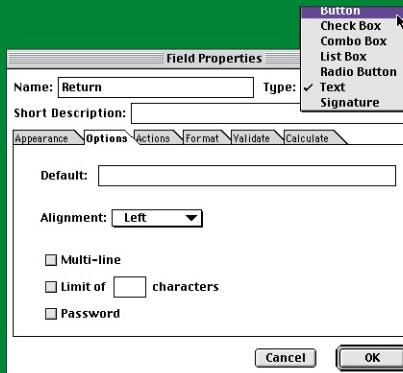


## A well-formed button

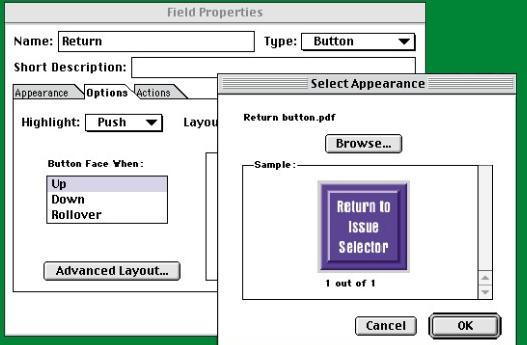
A crobat's Form tool was put to good use in creating a button to return to the Issue Selector PDF:



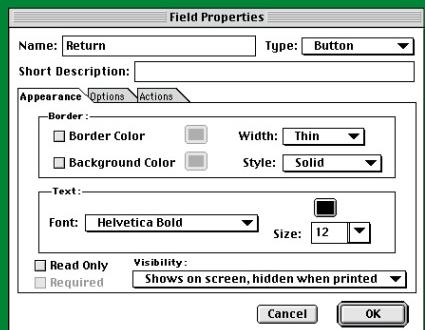
**1** The original cover has the 'No CD?' flash at the bottom-left corner. The idea is to cover this with an active button that takes you to the Issue Selector PDF. Select the Forms tool via the side menu bar, or use the 'V' key, and then drag out the rough area for the button.



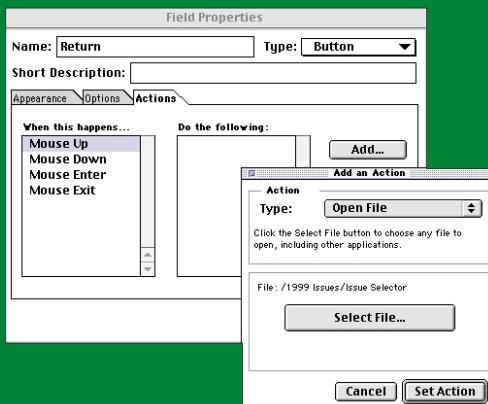
**2** In the Field Properties dialogue, give the button a name ('Return') and set the type to "button".



**3** In Options, set the appearance to "icon" and load up the button. This one was created in Photoshop with Extensis PhotoTools 3.



**4** In Appearance, set the Background Color to none, and Visibility to "Shows on screen, hidden when printed".



**5** Set the action to Open File and select the file – here, it opens Issue Selector.pdf.



**6** The final result. On moving over the button, the cursor changes to the familiar pointing finger. Click on the button and it indents a little; release it and it automatically opens the relevant PDF.

to continue, and control to be retained over the order in which PDFs are created by Distiller. To save on background processes, and the slowing down of work in XPress, it is easier to create a number of PostScript files and drag-&-drop the whole bunch while taking a break.

It took the best part of three days' solid work to create all the individual PDFs. Even the most carefully prepared back-ups can have problems with missing fonts, modified images, corrupted elements and so on. Spreads had to be output as spreads from XPress, rather than rely on Acrobat's continuous facing-page layout option – this leaves a gap between the facing pages.

Additionally, many of the generated PostScript files were huge – over 500MB on many occasions. Such files take a lot of time to write to disk and then convert PDF in Distiller, even with a 400MHz G4. However, it's worth mentioning that despite all the background activity, neither the G4 nor XPress 4.1 crashed at any time.

### Working with Acrobat 4

Most of the work without Acrobat 4 fell into four categories – recreating the layout of each issue of *Macworld*, setting up bookmarks, threading all pages, and making all page/URL links.

The first of these was a simple matter of importing all pages in order. One anomaly though – each cover has an extra 10mm to the left for the spine. XPress's print dialogue allows you to crop from the right, but not from the left. As the covers were often complex, it was far easier to crop in Acrobat 4 than to try and edit the text and images in XPress.

Bookmark creation was easy and included a sub-category for each review. Threading, however, was awkward. The idea is that you click on the first paragraph of a feature and the screen fills automatically with that paragraph. A second click moves to the next paragraph, and so on through to the end of the main text. The next click goes to, say, the first panel, and further clicks may go to another panel or a table. So, threading an article sets up the reading order.

Unfortunately, it doesn't take into account differing screen sizes. Enlarging a paragraph to the full width of a 21-inch monitor would make it unreadable, but it's legible on a 14-inch screen. Consequently,

all pages are threaded, but, generally as a top and bottom half – with any panels and tables placed at the end of the thread. This won't suit everyone, but navigation can always be achieved by use of the standard zoom in/out facility (⌘-spacebar and ⌘-alt-spacebar respectively), plus, the return, enter or cursor keys for movement up/down and between pages.

All covers, and items on the contents pages, were linked to the relevant articles, and URLs to Web sites. Acrobat's Link tool is a doddle to use, and the keyboard shortcuts for selecting tools are very useful. But, it's also a very time-consuming affair. Firstly, hit 'A' to select the Text tool, highlight the text and copy, hit 'V' to and select the Link tool. Then, hold down alt and highlight the text again to auto-create the hot-spot, and bring up the Link dialogue box. Next, set the link type to World Wide Web, click on edit URL, type in "http://" and then paste the previously copied URL text. Imagine carrying that out 1,000 times. QuicKeys 4 was a godsend, automating most of the procedure.

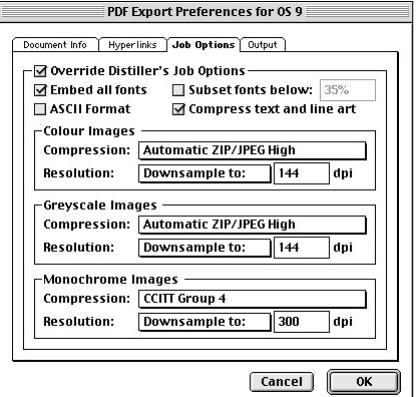
Acrobat Catalogue can be used to create a full-text index of a set of PDF documents. Once built, Acrobat Reader 4's Search command can find a word or phrase in the entire library quickly. In effect, it's a searchable database of all text in the set of PDF documents.

There are few pitfalls here, aside from remembering to optimize for CD. Don't make any changes to documents after creating the index, otherwise a rebuild is needed – often preceded by a purge to remove all unnecessary files.

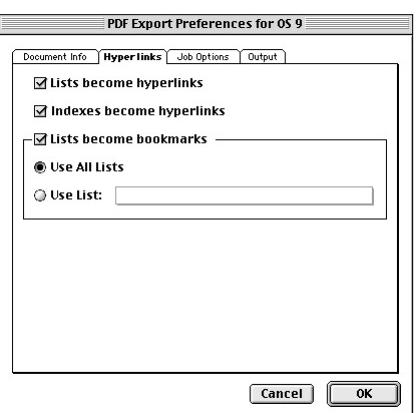
### The end result

When creating a CD such as this, various other aspects have to be worked on. These include security, default page layout, view and window options, default index, search preferences, and full screen preferences. Many of these are purely subjective.

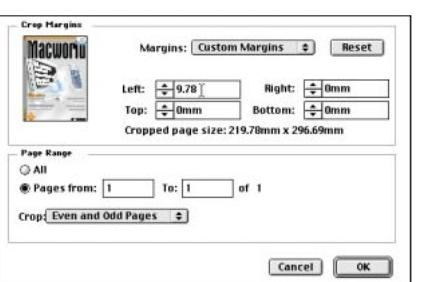
The final product takes up around 100MB of disc space – not bad for 856 pages and a huge number of images. See page 16 for more on our cover-mounted archive CD. **MW**



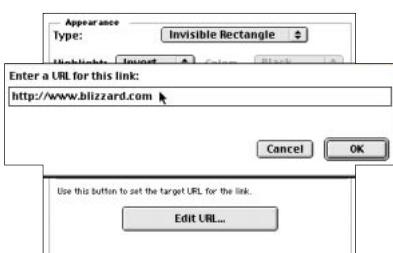
**On the job**  
QuarkXPress 4.1 sports a number of options (above) for PDF Export including overriding Adobe Distiller's job options...



**Acrobat's edge**  
... and converting lists to bookmarks. However, the relatively simple nature of our bookmarking was easier to achieve by hand within Acrobat (below).



**Acrobat cropping**  
*Macworld's 10mm cover spines had to go. It's easier to crop these in Acrobat than in XPress.*



**Acrobat URL**  
*Acrobat's Link tool creates the correct-sized rectangle around selected text automatically.*

create



web

# Crack the Web code

Create bandwidth-friendly streaming multimedia.

By Jim Heid

The Web's HyperText Mark-up Language has a lousy sense of timing. In fact, HTML has no sense of time at all. Unless you resort to migraine-inducing chunks of JavaScript code, you can't create pages in which elements appear or disappear at specific times. Too bad, because time is a cornerstone of multimedia. Look at video- and multimedia-authoring programs: they're built around timeline-based windows that show a project in successive stages.

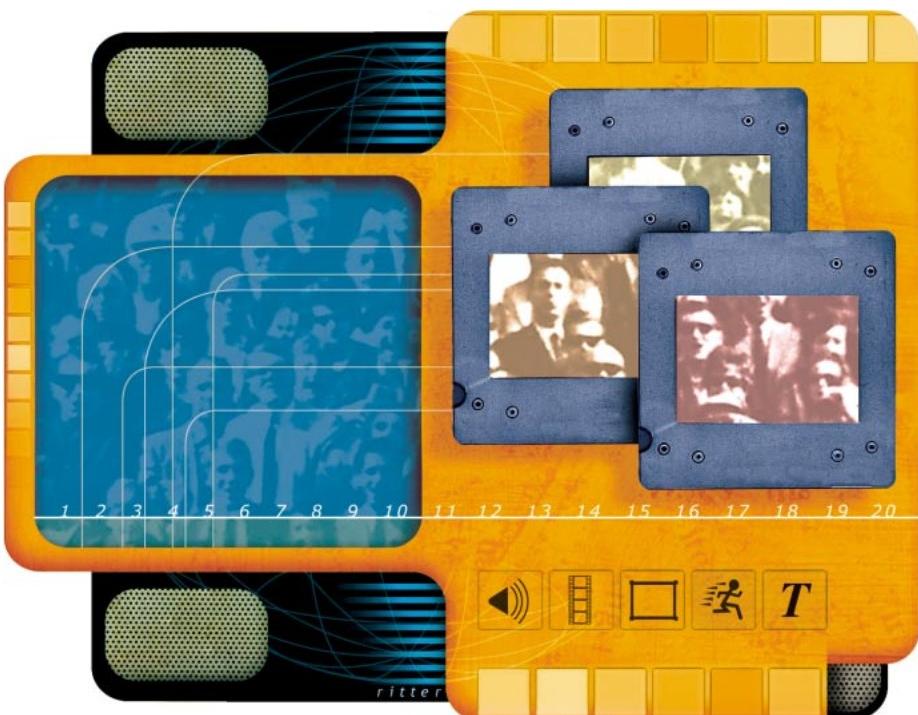
Two relatively new mark-up languages go beyond HTML, by supporting not only spatial mark-up – control over where things appear – but, also temporal mark-up – control over when they appear. One language is called HTML+Time, and currently, only version 5 of Microsoft Internet Explorer for Windows supports it – so it's of limited value to Web designers who want to reach the millions of surfers using different, or older, browsers.

## Real time

The other time-based mark-up language is called SMIL (pronounced smile), short for Synchronized Multimedia Integration Language. SMIL is supported on tens of millions of computers right now, thanks largely to RealNetwork's ([www.real.com](http://www.real.com)) RealSystem G2 streaming platform. The RealPlayer G2 family understands SMIL. SMIL-based interactive projects can play back within the G2 player window, or directly within a Web page via the G2 browser plug-in. At press time, Apple announced that QuickTime 4.1 will support SMIL. Details are still sketchy, but, it's good news that the language will be expanding beyond the RealSystem G2 streaming platform.

SMIL's approach to integrating media has some big benefits for Web developers. Interactive-training courses, Internet-radio jukeboxes, narrated slide shows – and it's ideal a host of other tasks. In "Presenting with SMIL", I show you a simple SMIL project, and take a look at how SMIL works in the RealSystem G2 platform.

JOHN RITTER



## Advantages to smile about

Several elements work together to give SMIL its capabilities.

**Multiple media** As the name Synchronized Multimedia Integration Language indicates, SMIL presentations can marry multiple-media – in RealSystem G2's case, audio, video, still images, text, and Macromedia Flash animations.

Note that the SMIL file itself doesn't contain these media. Just as an HTML file doesn't contain graphics, but, instead uses tags to refer to them, a SMIL file merely references content that you've already created using the RealSystem applications.

**Interactivity** Any of the above elements can also contain hyperlinks. Make a still-image a hyperlink, for example, and a user can click on it to go to a Web page, to a different portion of the SMIL project, or to a different SMIL project.

continues page 108

## What you need

- A text editor, such as Microsoft Word, or the Mac OS's SimpleText
- RealPlayer G2
- A RealSystem G2 server
- A compression utility, such as Terran Interactive's Media Cleaner Pro 4 ([www.terran.com](http://www.terran.com))



I created a simple project that illustrates some of SMIL's key capabilities. The project comprises some stock photographs downloaded from the Web and delivered as RealPix images, accompanying RealText captions containing hyperlinks, and a RealAudio soundtrack.



### The Layout

The head portion of a SMIL file contains a `<layout>` section that specifies the names and dimensions of the RealPix region (A), and the RealText region (B).

```
<layout>
<root-layout width="320" height="290"/>
<region id="pix_region" width="320"
height="240" left="0" top="0"/>
<region id="text_region" width="320"
height="50" left="0" top="240"/>
</layout>
```



### RealText Captions

Working with RealText isn't too different from working with text in HTML. Here, for example, is the code for the Space Needle image's caption.

```
<br/><clear/>
<time begin="42"><pos x="15" />
<pos y="18" />
Don't miss the <a href="http://www.seattlecenter.com/">Space Needle</a>
```

The code begins by clearing the previous caption from the RealText area. Then it displays the new caption 15 pixels from the text region's left edge, and 18 pixels from its top edge. An HTML-like `<a>` tag creates the hypertext link.

### RealPix Effects

RealPix allows for bandwidth-friendly effects rendered by RealPlayer G2. Here's the code that produces the cross-fade effect illustrated in these three images.

```
<crossfade start="41"
duration="1"
target="8" />
```

The cross-fade starts 41 seconds from the beginning of the presentation – most time-oriented SMIL tags specify their values in this way. The cross-fade's duration is one second. Each image in a RealPix presentation is assigned a number; in this case, the target of the cross-fade – the image to which the first image is fading – is number eight.

**Bandwidth-friendly effects** You can add several different transition effects between still images. Because RealPlayer G2 renders these effects at playback time, they don't increase the download burden by a single byte. Adding fades, dissolves, wipes, and other eye candy can spice up an otherwise static set of images. And because you're working with still images, these slide shows don't have the traditionally tiny, jerky look of streaming video.

**Text-based flexibility** Because SMIL is a mark-up language, its marriage of media happens through simple, HTML-like text tags. This not only makes SMIL relatively easy to learn, but also opens the door to some extremely powerful applications. With a CGI script, or other back-end software, you can generate SMIL files on the fly, and thus tailor a presentation to specific conditions. For instance, you can play different content depending on the time of day, play different sections of an online training course depending on how well a user is progressing, and display real-time news or weather data retrieved from a distant server. Multimedia technologies that rely on binary files don't allow this flexibility.

Because SMIL files are just text files, you can create them using any text editor – from the Mac OS's SimpleText, to

Bare Bones' BBEdit, and Microsoft Word. As you can see in "Presenting with SMIL", SMIL looks a lot like HTML – if you know HTML, you have a considerable head start in learning SMIL.

### Spoilt for choice

Today's Web designers can choose between typing tags by hand, and using a WYSIWYG editor such as Adobe GoLive or Macromedia Dreamweaver. Alas, SMIL authors aren't as lucky – there are no SMIL layout tools for the Mac yet. Macromedia does offer a free RealSystem G2 layout extension for Dreamweaver ([www.dreamweaver.com](http://www.dreamweaver.com)), but it's limited primarily to inserting RealSystem G2 content into Web pages.

The picture is only a little brighter in Windows. The few available SMIL authoring programs are awkward, lacking the elegance of tools such as Macromedia Flash. RealNetworks offers two terrific but basic SMIL tools: the free RealSlideshow, and the \$29 RealSlideshow Plus. Both enable you to drag images into a timeline window, and synchronize them with RealAudio sound tracks. RealSlideshow Plus adds support for RealText text captions and includes numerous design templates to give you a head start.

RealNetworks isn't planning Mac

versions of either RealSlideshow program, but you can run both on your Mac using Connectix's Virtual PC 3.0 (£149; [www.connectix.com](http://www.connectix.com)). They ran without a hitch in my informal tests. Ever eager to push the envelope, I also tried running RealServer G2 under Virtual PC. Alas, the envelope ripped. I was able to run the server and access it locally – that is, from RealPlayer G2, also running under Virtual PC – but, I couldn't access it over the Internet. Still, the ability to access RealServer G2 locally could be useful for testing SMIL presentations.

### Serving SMIL

If you're up-to-date on streaming media, you know that you can deliver RealAudio, or RealVideo, files in two ways – with proprietary RealNetworks server software, or with the same HTTP server that dishes out your Web pages. The HTTP route has the advantage of not requiring you to buy and run another piece of server software, and you can serve some simple SMIL presentations using HTTP. The results aren't too hot, though – presentations can take a long time to buffer before playback begins, and media elements can fall out of synchronization. And, sophisticated SMIL projects simply don't work at all over HTTP.

For more reliable results, you can take

the G2-server plunge: download and use the free, 20-stream Basic Server if yours is a small-traffic site; plunk down £450 for a downloadable 40-stream server; or break the bank and pay five figures for a high-capacity server. A smart alternative is to contract with a service provider that offers G2-hosting services. You'll find a database of these providers at <http://partners.real.com/powersearch.html>.

### More smiles ahead

SMIL's future looks bright. This year is likely to bring professional-level authoring tools for the Mac OS and Windows alike. And, a new version of the SMIL standard, called SMIL Boston – so named because the standards meeting was held in Beantown – promises better animation and a degree of support for interactive television.

Even if you're using another streaming technology for Web multimedia, it's worth your while to look into SMIL. Its tag-oriented approach to time-based presentations is a harbinger of what we may see in future versions of HTML – versions that can tell the time. MW

**A contributor to Macworld since 1984, Jim Heid writes about all facets of multimedia.**

### Learn more about SMIL

RealNetworks' DevZone  
[www.real.com/devzone](http://www.real.com/devzone)  
Just SMIL  
<http://smw.internet.com/smil/news/>  
W3C User Interface Domain – Synchronized Multimedia  
[www.w3.org/AudioVideo/](http://www.w3.org/AudioVideo/)

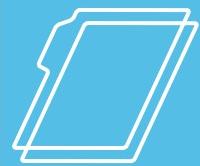
### Advanced SMILing

I've only scratched the surface of SMIL's talents in this article. Here are some of the language's more advanced capabilities.

**Panning and zooming** You can add a sense of motion to a series of static RealPix images by panning across images, or zooming in and out. Simply make the image larger than the RealPix region, and then use the `<viewchange>` tag to pan or zoom.

**Bandwidth and language switching** SMIL's `<switch>` tag lets you tailor a presentation to specific languages and connection speeds. You can provide both a Spanish and an English soundtrack, for instance, and use a `<switch>` tag to play the appropriate one based on settings a user has made in RealPlayer G2's Preferences window. Similarly, you can use `<switch>` to provide different types of content depending on a user's connection speed – still images for a modem user, and motion video for a DSL user.

create



graphics

# Adding a new dimension

Photoshop can speed-up 3D work – and improve your effects.

By Cathy Abes

**T**hree-dimensional imagery is so appealing because, when it's done imaginatively, it can pull you, seductively, into the depths of its fabricated world. But, far too many illustrations fall short of that ideal. One of the reasons, says digital illustrator Nick Fain, is that most 3D programs typically don't allow for much customization of colours and textures. As a result, an image rendered in a 3D program tends to look flat, dull, and unrealistic – defeating the whole point of 3D imaging.

That's where Adobe Photoshop comes in. Exploiting its arsenal of colour-enhancement tools and filter effects, Fain can quickly create natural-looking texture maps for his 3D models. Doing the work would be much more time-consuming and difficult with a 3D program alone.

For this illustration, which appeared in *Publish* magazine in the US, Fain created a circuit board that resembled a cityscape. In *Byte*, by *Byte's Sculpt 3D*, he built a relatively simple model and ray-traced it. He then created an alpha mask and imported it into Photoshop – allowing him to work on individual elements.

For highly detailed print images such as this one, Fain prefers to add shadows and atmospheric effects – such as fog, smoke, and glowing lights – in Photoshop. It not only gives him better control and quality than a 3D program, but also lets him create and modify such effects much more easily. For instance, he can alter an element without having to re-render the entire image.

Fain created this image on his Power Mac G3, with Photoshop 5.5 and Sculpt 3D, although he could have built the model with virtually any 3D program on the market. **MW**

**Cathy Abes**, author of *Photoshop F/X* (Ventana Press, 1994) and most recently a senior editor at *Publish*, has been writing about graphics and publishing for more than ten years.

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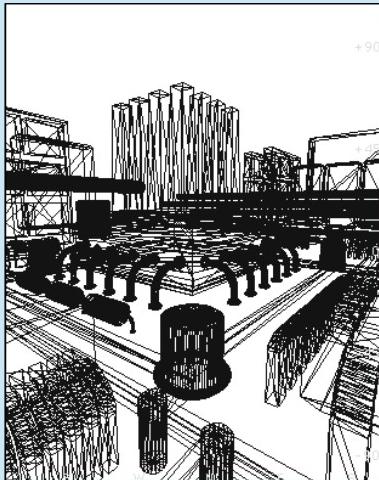
**A dose of realism**

By adding realistic-looking special effects in Photoshop, artist Nick Fain is able to transform simple 3D models into dynamic illustrations. He applied his technique in this artwork to make a circuit board look like a futuristic cityscape.

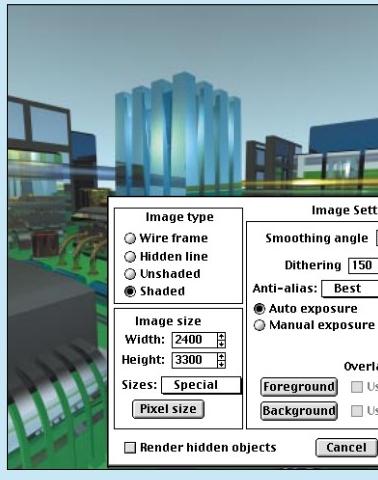


graphics

## Photoshop adds 3D punch



**1** In Sculpt 3D, Fain used relatively simple geometric shapes to build a model of the circuit board, shown here in wire-frame mode. Using a wide-angle lens, he positioned the program's camera to view the scene from a dynamic three-point perspective.

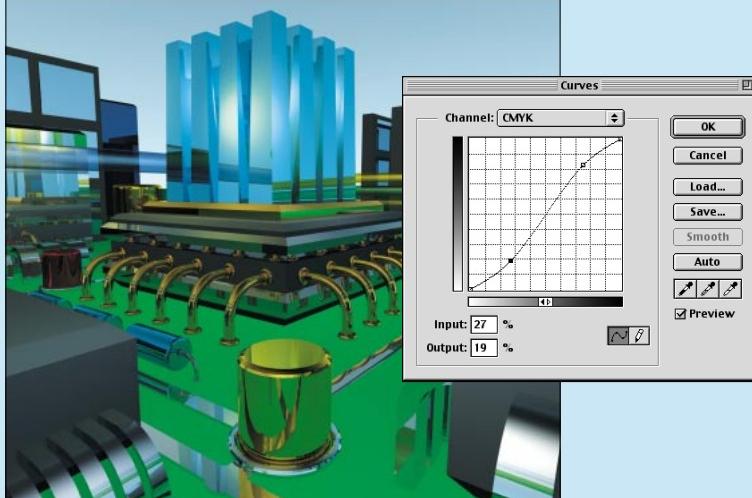


**2** To achieve a photo-realistic look, he ray-traced the image in Sculpt 3D, with the highest-quality settings and with shadows turned off. Fain typically renders 3D images without shadows, reducing rendering time. More important, he can easily create the shadows in Photoshop, a program that provides better controls and produces superior results.

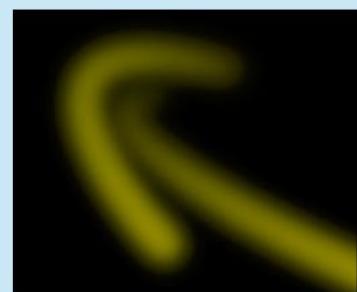
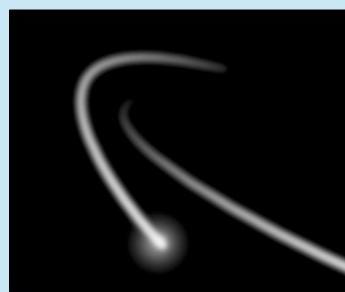
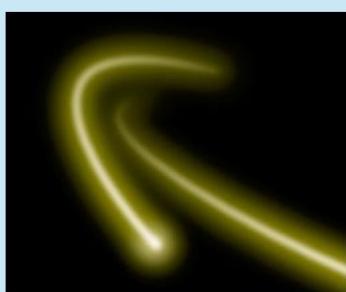


**3** He created an alpha mask in Sculpt 3D in order to separate key elements in the image – such as the CPU in the centre and the cylindrical-shaped capacitor – from the background. Then he imported the mask into Photoshop and worked on the elements individually.

**4** To punch up the colours and sharpen the contrast throughout the image, Fain made adjustments with Photoshop's Curves command, increasing the saturation, lightening the mid-tones and highlights, and increasing the density of the shadows.



**5** Finally, he added the glowing comet tails swirling around the CPU. Each of the tails consists of a yellow tail, a white tail, and a white hot spot – the last two residing on the same layer. Using Photoshop's airbrush tool, Fain made two stroked paths (a long, soft stroke for the yellow tail and a shorter, thinner one for the white tail) and added a glow for the hot spot at the beginning of the tail by clicking once or twice with the airbrush tool. He used a 35-pixel brush for the yellow tail, a 25-pixel brush for the white tail, and a 65-pixel brush for the hot spot.





# Out of site, out of mind

Keep track of your  
Web-site passwords  
– securely  
by Joseph Schorr

**Y**ou've probably experienced password amnesia if you do any Web surfing at all: you return to a Web site you registered at weeks before, only to realize the particular user name and password you created for that site have totally evaporated from memory. Suddenly, you can't remember if the password is your dog's name (no, that's my eBay account), your favourite vegetable (nope, used that for Hotmail), or maybe just your birthday (or was it my wife's birthday?). After exhausting the 37 different user name and password combinations you've somehow managed to accumulate in your Web travels, you give up. In desperation, you end up creating a new registration, adding yet another user name and password to the collection.

And, it just keeps getting worse: each week you're hitting more members-only Web sites, signing up for another free

e-service, or joining a new online auction. Your list of passwords keeps getting longer. How do you keep track of all this vital information, without compromising your security?

Mac OS 9 makes managing the plethora of passwords much easier – with the Keychain, which allows you to stash multiple-user names and passwords in a single, secure, password-protected control panel (see "Meet the Keychain"). But regardless of which OS you're running, there are a few tactics you can use to keep your password-protected data safe and secure – and easily accessible.

## Set it, and forget it

Many Web sites offer to remember your user name and password for you by planting a cookie file on your hard disk. A cookie stores all your relevant user information and enters it automatically when you return to a Web site, saving

you from having to manually log in.

In addition, some browsers, such as Microsoft Internet Explorer, let you save passwords on a site-by-site basis, freeing you from having to remember user names and passwords at all.

## Risky business

These features certainly make life easier, but they also present two huge problems. First, storing such settings on your computer is an obvious security risk. Essentially, it means that anyone who gains access to your computer can easily log onto Web sites, mount network volumes, and send email – using your identity. It defeats the whole point of password protection.

Second, this "set it and forget it" approach almost guarantees that you will, in fact, forget these passwords because you never have to type them. That's all just fine – until you're on the road, or at a friend's

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## Meet the Keychain

Mac OS 9 doesn't completely eliminate the problem of managing your numerous user names and passwords, but it does make it much easier, thanks to the Keychain feature. The Keychain is a control panel that allows you to permanently store all the passwords and user names you need for connecting to servers, logging onto Web sites, or opening locked applications (see "Open sesame"). These password "keys" are stored in a single Keychain file that, in turn, is

locked with a master password. You still have to remember a password – but only one.

Keychain-aware applications, such as AppleShare, automatically check the Keychain for a password when it's required, so typing in your master password unlocks access to numerous password-protected sites. Even with the Keychain, caution is needed: when your Keychain is unlocked, anyone using your computer can gain access to items requiring your passwords.

However, you can configure the Keychain control panel to re-lock itself after a specified period of inactivity. This option is not on by default, so be sure to activate it when you first set up your Keychain (see "Lockdown").

Name	Kind	Date Created
MegaNoodle	AppleShare password	10/11/99
www.breem.com	Internet password	10/11/99
www.nytimes.com	Internet password	10/12/99
www.wonderwheel.com	Internet password	10/11/99

**Open sesame**  
The Keychain control panel lets you store all your passwords. To see the password for a specific item on the list, select the item, click on the Get Info button, and enter the master password when prompted.

**Change "Tuba" Settings**

**Password:**

New:  Confirm:

Allow access without warning

Lock after 10  minutes of inactivity

Lock when the system sleeps

**Lockdown**  
Set up Mac OS 9's Keychain to automatically re-lock your passwords whenever your Mac is inactive or asleep.



### Quicker QuickTime

**tip** People tend to have strong feelings about QuickTime 4's QuickTime Player; some heartily dislike it. For an example of why, take the volume-control thumbwheel. One sweep of the mouse doesn't seem to turn it very far. The trick is to remember that this is a virtual thumbwheel. Patrick McClure discovered that you can click the thumbwheel and drag up (or down) past the point where you no longer seem to be touching the thumbwheel; the volume continues to change until it reaches its maximum (or minimum) setting. You can also change the sound level by clicking and dragging directly in the volume indicator located next to the thumbwheel.

If you prefer using keyboard shortcuts, you can ignore the thumbwheel completely and simply use the up- and down-arrow keys to control the volume, notes Benjamin Drew. The new QuickTime Player recognizes many of the keyboard shortcuts from previous versions: the return key and the spacebar both start and pause forward play, the right-arrow key steps forward and the left-arrow key steps backward, and ⌘-right arrow plays forward and ⌘-left arrow plays backward.

### Unreadable rewritable CDs

**tip** When I burn a CD-RW disc and put it in my LC 630's internal CD-ROM drive, it doesn't appear on the desktop. Yet the same CD-RW disc mounts fine on a Power Mac 6100, a G3 machine, and an iMac. I've heard that older CD-ROM drives don't have the requisite speed for rewritable media.

Since I don't encounter this problem when using CD-R media, I can't see how speed is an issue.

Arvind Upadhyay

**A** The problem is not with the speed of your drive, but with the discs. Simply put, CD-RW discs are less reflective than CD-R discs and factory-made CDs. Older CD-ROM drives such as the one in your LC, as well as some older audio-CD players, don't have the necessary circuitry to compensate for this low reflectiveness. Most new CD-ROM drives and audio-CD players can read CD-RW discs, although some CD-ROM drives read them at a reduced speed.

### Really big back-up files

**tip** I recently had the "bright idea" to install an inexpensive 18GB hard drive in our company's main Mac file-server as back-up storage (using Dantz Development's Retrospect) for our network. But, after everything was set up, I discovered that even with full compression, the Retrospect back-up-set file exceeds the 2GB file-size limit for Mac OS 8.6. Is there any way to get around this file-size limit?

Will Pearce

**A** To create files of this magnitude, you need two things. First, you have to get Mac OS 9, which features the HFS+ disk format, and which is the first version of the operating system that provides the programming interface applications needed in order to save files larger than 2GB. Second, you need

a version of Retrospect that makes use of this programming interface. Unfortunately, the latter does not exist – yet.

You could perform a scheduled Duplicate for each hard drive that you want to back up. To make a complete back-up of each hard drive on your network, specify the destination for each drive – or source volume – as a different folder – sub-volume – on the 18GB back-up hard drive (see "Big back-ups"). If you want the back-up folder to be an exact duplicate of the source, select the Replace Entire Disk option. In this mode, Retrospect will replace all files that have been changed and delete files that no longer exist on the source. On the other hand, if you want the destination folder to contain all the files that are on the source, plus any files that were already in the destination folder, but were deleted from the source, select the Replace Corresponding Files option.

An interesting variation is to specify the same destination on the back-up drive for all the networked hard drives and then choose the Replace Corresponding Files option. In this case, the back-up drive or folder will contain a superset of the files from all the networked hard drives. For example, you could use this configuration to transfer only new and re-recorded MP3s, from several source computers, to a master collection on one big destination hard drive.

With any of these configurations, the Duplicate process is incremental. Retrospect scans the destination folder and copies only those files that are new, or that have changed.

Keep in mind that you shouldn't back-up only to a hard drive on your premises. It's important to back-up to media that someone moves off-site. Otherwise, the fire, flood, earthquake, hurricane or theft that destroys the original will also likely destroy the copy.



### Contact camouflage

You can hide passwords anywhere, as long as they don't look like passwords. In this example, a password (Hamlet) and user name (Columbus) are secreted in a Palm Desktop address-book entry.

house, and you need to use another computer – one that doesn't contain your personal cookie files. You may be prompted to enter user names and passwords you've long since forgotten.

### Secret hiding places

Security experts say that, as a general rule, you shouldn't keep unencrypted passwords stored anywhere on your computer. But, unless we're talking about issues that involve national security, you can safely keep such information close at hand – as long as you keep it cleverly disguised.

One easy way to do this is to camouflage password information within entries in your contact database, PIM, or address book. I know people who've done this for years, and it works great.

Suppose you register at a Web site about animal care, where your user name is Columbus and your password is Hamlet. Just fire up your contact database and create an entry for, say, the Columbus Veterinary Clinic. Make the address 492 Hamlet Circle. Give the entry an authentic look by adding phone numbers and other details (see "Contact camouflage").

Now you have an easy and secure way to look up your password. No one is likely to deduce where you've placed this information, especially if it's in among hundreds of legitimate contacts. At the same time, the info is readily available to you whenever you need it. And if you synchronize your desktop contacts with those on your Palm, you'll automatically have all your passwords with you on the

### • Read the unreadable

### Dragging background windows

**tip** If you need to move a window that's behind your current window – in the same application – simply hold down the ⌘ key while you drag the title bar of the background window. With this neat little trick, the background window stays in the background, so you don't need to click back and forth between windows.

Jake Sargent

### Outsmart Word's auto-indent

**tip** Microsoft Word 98 automatically adjusts an entire paragraph's indentation when you press the tab or the delete key at the beginning of a paragraph. This is often annoying – the formatting of paragraphs that follow the altered one can be troublesome to novices. Word Help says you can turn off all automatic formatting by choosing AutoCorrect from the Tools menu, and clearing the check boxes on the AutoFormat As You Type tab of the dialogue box. Don't believe it. Instead, you must choose Preferences from the Tools menu and clear the Tabs and Backspace Set Left Indent option on the Edit tab. Now Word will stop trying to outsmart you.

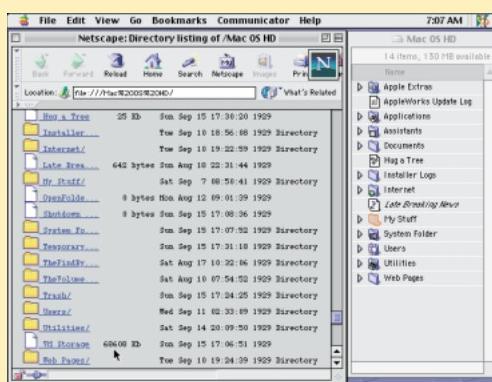
John Schoenfelder

### Unwieldy scissors

**tip** The new Scissors cursor in QuarkXPress 4.1 can be a bit unwieldy if you require precise point placement. You may want to hold down the Shift key to convert the

## Browse invisible items

In "Cloaked killers" (Secrets, September 1999), Ted Landau suggested using Sherlock to list invisible files. An easy way to see the invisible files in any folder is simply to drag that folder onto a Netscape Navigator window (see "Decloaking device"). Navigator will list all of the folder's files and subfolders – including the invisible items. This does not work with Microsoft Internet Explorer 4.5. If you see a file that you want to



**Decloaking device**  
You can see the invisible files in a folder, or the root level of a disk, by dragging the folder or disk icon to a Netscape Navigator window and comparing its list to the Finder's.

cursor to a crosshairs icon to help exact cutting. Be careful about where you place your cut: the Undo feature doesn't work with the Scissors tool yet. You might want to save before cutting, in case you need to Revert to the previous version of your document. If you use this tool a lot, you'll find it's easy to elicit an error message that tells you to "Click on the boundary of an item to cut it." Rather than having to dismiss this message repeatedly, check the "Don't show this warning again" checkbox so that XPress will "beep" at you when you try to cut in an illegal location. If you need to restore the warning dialogue box, you can always click the new "Re-enable warnings" button.

Paul Rodney

road, too. Generally, just seeing a contact entry will be enough to jog your memory and remind you which words constitute your user name and password.

By the way, the same trick can be used effectively to store other sensitive data, such as bank-account numbers, PINs, and credit-card info. Make up names (Vince Cardiff for your Visa card, for example), and turn account numbers into telephone numbers and expiration dates into addresses. The information is close at hand, but never at risk of being stolen.

### The good word

Finally, if you're not looking for Pentagon-level security, you can alleviate some password amnesia simply by settling on just a few passwords and user names – or even

just one – rather than making up creative new ones every time you sign up for a new e-service. As you've probably heard before, passwords should not be obvious choices like your last name or anniversary date or the name of your pet gerbil. One good approach is to pick a word at random: open a book or dictionary, turn to any page, and point to the first word you see. Make that your universal password. Then you'll have only one word to remember.

**Joseph Schorr, a co-author of Mac Secrets, fifth edition (IDG Books Worldwide, 1998), has accumulated more than 40 user names and passwords in the last 12 months, including Frogman, Kukumbuka, and Murry.**

Apple is flying high again, but its software may cause a crash

## Desktop critic

DAVID POGUE is the author of *iMac for Dummies* (IDG Books Worldwide, 1998) and the *Great Macintosh Easter Egg Hunt* (Berkeley Books 1998). He also wrote *Macs for Dummies*, fifth edition, updated for Mac OS 8, *The Weird Wide Web* (IDG Books Worldwide, 1997) and *The Microsloth Joke Book* (Berkeley, 1997).

# i-con merchants

**A**pple, as anyone can tell you, is flying high these days. Its stock, reputation, and sales are soaring. Most of this good fortune stems from Apple's return to its former focus: design. Sensational, rule-breaking, irresistible design. After all, without its translucence, shape, and colour, what is the iMac? A Performa.

If you ask me, Apple's chief designer, young English hotshot Jonathan Ive, should get as much credit as Steve Jobs for saving Apple. But Ive isn't designing the software, and that's why we need to start worrying. For the last year, the company has been adopting a new standard-interface design, one that features a brushed-stainless steel look. There's nothing wrong with trying to apply Ive's attitude of brazen freshness to software. The problem is that "different" doesn't necessarily mean "better".

You can learn to dislike the new interface-look in a growing tide of Apple software products: Final Cut Pro, Sherlock 2, iMovie, Apple DVD Player, and most prominently, QuickTime Player 4. You'll quickly discover that their new designs do away with many long-established and very important Mac controls. For example, the "metal" windows lack standard title bars. Without title bars, you can't tell which window is active. Nor can you window-shade these windows – a meaningful loss. Gone, too, is the zoom box in the upper-right corner, one of the most prominent Mac advantages over Windows. There is a non-standard resizing handle in the lower-right corner – but in QuickTime Player it serves only to change the QuickTime movie's size, not the window's.

There's more – much more. You can find an overly harsh but deeply impassioned list of QuickTime Player's design deficiencies at the Interface Hall of Shame Web site ([www.iarchitect.com/qtime.htm](http://www.iarchitect.com/qtime.htm)). A few examples of what they're saying.

- Buttons no longer dim when unavailable – the Play button, for example, dims whether a movie is loaded and playable or not. Apple blatantly favours cool-looking icons and buttons over informative ones, but refuses to add pop-up "tool tip" labels.
- I dare you to figure out what QuickTime Player's shirt-button button does by looking at it.
- The "tray" that slides out of the bottom of the window

shows a bunch of identical, nameless black squares representing your stored movies.

- There's no built-in help – the Help command simply dials up Apple's Web site.
- It has no scroll bar, and doesn't open at all if the window is near the bottom of your screen!
- There's the volume control. Making it a thumbwheel is the height of the New Stupidity – it's almost impossible to turn a tiny round thumbwheel with that most linear of pointing devices, the mouse. "Watching new users try to adjust the volume can be a painful experience," says the Interface Hall of Shame article.

The online reaction to this increase in bad design has been swift and punishing. MacOpinion.com:

"The latest crop of industrial designers at Apple have to be rounded up and killed." Salon.com: "Does anyone at Apple still care about the Human Interface Guidelines?" The founder of Apple's Human Interface Design group himself (long since gone from Apple), interface expert Bruce Tognazzini, wrote that "no one apparently ever checked to see whether the design worked". In the first week following its release, over 15,000 people downloaded Window Fixer ([www.teamdraw.com/raul/stuff](http://www.teamdraw.com/raul/stuff)), a free patch that strips the stainless steel off Sherlock 2.

The beleaguered Apple of 1997 may have cared what its customers thought. These days, however, Apple suffers from a dangerous disease:

arrogance reinforced by success. In other words, the company thinks it knows what it's doing. The chief arbiter of interface taste is, by all accounts, Steve Jobs himself. Jobs, says former co-worker Tognazzini, has "a definite antipathy for interface designers".

But it's not too late. Apple can have its stainless steel and its arrogance, too. It can fix the problems without losing face. It's not the new look that's the problem; it's the features. In some "point-oh-one" update, Apple could restore our beloved gizmos to the title bar and window corners, fix the volume and tray controls, and add online help.

Thankfully, many of these concerns look like they'll be fixed in Mac OS X. The release of the biggest Mac software-redesign project in history, Mac OS X, is only months away. If relatively small-scale projects like QuickTime Player and Sherlock 2 are any indication of the direction the Apple ship is taking, the time for a course correction is right now. **MW**

